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The American Farmer.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." *Virg.*

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[NEW SERIES.]

A Farmer's Education.

An address prepared for the Baltimore County
Farmers' Convention of 1881, by
Dr. J. T. COUNCILMAN.

It has occurred to me, in thinking over the situation, that to attain perfect success in our business of farming we should devote attention to the training of our successors. The idea seems to prevail that culture is not necessary in farming, and if a learned man comes into our ranks it is because he was educated for some other position and has kicked out of the traces. Let us try to raise a race of new farmers who shall supplement our deficiencies, restore our worn-out soils and make a paradise of the earth on which we live. How this may be best accomplished we propose now to consider. We propose to speak of the farmer's education.

We do not deny that a good farmer may grow up on the farm and learn to perform all the operations, to plow, to harrow, to reap, to mow, without knowing anything more than the mere practical routine of farming, but he is only a laborer, strong and stalwart perhaps; his daily tasks awake no enthusiasm; they are performed as tasks, and he turns elsewhere for amusement and recreation, and if at all ambitious soon grows ashamed of his ignorance and disgusted with his occupation. These are they whom our city cousins call clodhoppers, &c. He goes to the ale-house for consolation and says farming does not pay, or perhaps takes to saving money, becomes too penurious to farm wisely, and falls far in the rear of the march of improvement. No, gentlemen, it will never do; if we wish to dignify and exalt our profession, the most ancient and honorable of arts, we must, to the careful performance of its operations, add a knowledge of the why and the wherefore; we must not only be operators, but philosophers skilled to discover causes, and intimately acquainted with the laws of nature under which our operations are conducted. This alone will satisfy our aspirations for higher life, culture, and refinement. "As life is short and art is long," we must limit our research to the useful.

In modern times, as mankind have become aware of the almost unlimited extent of knowl-

edge, when the individual who has advanced farthest and attained the highest eminence in the domain of science sees around and beyond him still vaster fields inviting investigation, the necessity of limiting our study of details to some particular line of inquiry becomes more and more apparent. In short, concentration is necessary to success. A river whose waters are widely spread out over a meadow flows quietly along its course scarcely abrading its channel, but if confined in narrow limits will cut its way through a mountain gorge with irresistible force; so the man of general education, although it may be a great satisfaction to be so well informed, rarely accomplishes anything, whilst he who devotes his whole time and energies to some particular point will sometimes achieve results that will astonish mankind, just as the heat of the sun diffused through our atmosphere only warms—concentrate its rays by a lens and it burns.

Higher education is the fashionable talk of the day, particularly since the establishment of the Johns Hopkins University in our midst. I am an advocate of the highest education, and all honor be to the noble man who could perceive its value and devote a life-time to make its attainment a possibility amongst us; but do not let us deceive ourselves in this matter. The highest education is for the few and not for the many. One star differeth from another in brightness; one man has twice the physical strength of another, and the gifts of the mind are equally varied; one man in a thousand may have that peculiar organization and surroundings; many have that devotion that genius alone gives, that will enable him to surmount all obstacles and grow eminent by his learning; but for the crowd the highest education, the best education, is that which enables one to make an honest and honorable living whilst in the intelligent performance of those duties which devolve upon him—a fraction of humanity and a member of a community. Here is just one of the errors of our system of public education: it proceeds on the supposition that all men are cast like ingots in the same mould, and are to be polished by the same file; whereas nature is diverse and unequal in the distribution of her gifts, and although education may greatly modify nature, it can

never so far obliterate its tracings as to raise all men to the same level. The old proverb, "you cannot make a silk purse out of a pig's ear," expresses the same thing perhaps more forcibly. Yet this is what our systems of education are always striving to do.

We must have then, for our farmer, a special education; he cannot learn all things, and therefore it is better for him to study those things that will satisfy his longings for esthetic culture and be useful to him in every-day life. It would be utterly useless to send him to college, as they are now conducted, where the mind is cultivated at the expense of the body, and where years of seclusion from the sunshine enervates body and mind, and only enables the diligent student to write bad verses in Greek and Latin and to speak very bad French and German, and when he leaves the college he is like a plant raised in the shade—an hour of sunshine would wilt him up and he would be of no use in the field. Why should a farmer devote his precious time to learning how to express the same identical idea in half a dozen different languages, when his mother tongue abounds with other and more important ideas which he can scarcely hope ever to have time and opportunity to learn? For the farmer a triple education is necessary—moral, physical, intellectual—and they must go hand in hand.

We do not wish farmers to sit at home in the shade and write essays on the art, but a farmer who can go afield, seize hold of any tool and labor in the sun without any inconvenience, and afterwards write his essay in polished and refined language. The way to make a man strong and able to labor is—to labor; so that whatever course of education is adopted for the farmer, labor must pervade it; but labor alone, though valuable in developing strength, is not sufficient of itself, and should be supplemented by a regular and scientific training in the gymnasium that would develop every muscle to the utmost limits of perfection. I would have the job so well done that a blow from his fist would stun an ox, not that I wish him to give such blows, but that the possession of such strength would imply a degree of physical health that would give its possessor the courage, energy and self-reliance to render him indomitable, and the hard tasks of every-day life would be but play to him.

Education should commence with the earliest dawn of intelligence, and for the first seven years all children should be taught to reverence the Gods, obey their parents, and speak the truth under all circumstances, for these years the parents are the best teachers, and the usefulness of their after lives depends greatly upon the success of the teaching. For the next seven years the great idea should be inculcated that labor is honorable and profitable, and that idleness is the parent of all vice, and vice the parent of all misfortune. He should therefore have some simple duties to perform, and these should be performed under the supervision of the parents that he may get in the habit of doing well whatever he pretends to do. He can attend to the chickens, pigs, or young animals about the place, so that care and labor may go together. These tasks should be given him under the idea that

he is assisting his parents, that love for them may spur him on to duty. This too is the time when he must acquire the rudiments of the English language, and commence that course of mathematics which is to continue through the whole course of his education. With all these engagements he must have plenty of time for that rough and boisterous play in the open air that boys are so fond of.

With his fourteenth year his course of special training should commence. In addition to his English and mathematics he must be taught geology and mineralogy, in order that he may understand the structure and nature of soils; he should be able to judge of the quality of land by observing the cuts as he passed along in a railroad car by his knowledge of the constituent minerals exposed. He must learn all about botany, in order that he may understand the cultivation, growth and classification of the flowers and vegetables he raises. As the raising of the domestic animals is an important part of his business, the laws of biology and physiology should be familiar to him, in order that he may become expert at improving his stock by crossing, and the anatomy of animals he must of course learn as well as something of pathology, in order that he may treat their diseases.

As the judicious employment of fertilizers becomes an important part of modern farming, the farmer should know enough of analytical chemistry to save him from being the dupe of the dealers in these articles. Again, the use of labor-saving machines is constantly increasing, and the farmer should learn all about steam engines, be taught the use of tools so that in case of necessity he could repair and fix up any of the machinery he runs. All these things he should learn, and at the same time become an expert in the performance of every operation that is done on a farm. It will be said that all this is much to learn, and few farmers are able to teach their sons so much. I admit this and say that we have need of an agricultural college.

Then another objection would arise, viz.: That manual labor schools have always been failures. Without admitting the truth of this assertion we should meet it by saying that manual labor schools have always been conducted by literary men, and have had for their object the education of teachers, lawyers, doctors and parsons; to such schools the manual labor part has only been an impediment, and even then the failure has been not so much in accomplishing the object proposed as in the fact that they could not be made self sustaining, *id est*, the student working six hours a day under very imperfect supervision could not earn enough to support himself and pay for his tuition. Does any one wonder at this? But our college would be a model farm on a large scale. Endowed it ought to be by the State, and its current expenses paid by the sale of farm and garden products, by the raising and sale of thoroughbred stock, in which line it would establish a reputation that would insure a large demand for its products at highly remunerative prices. In addition to these resources each student should contribute two hundred dollars per annum to its income as a small compensation for the benefits of his superior education.

We would start our college with a president—not a cadaverous literary eel-skin, who has spent the best years of his life in noting fine discriminations in the various meanings of the Greek particles, but a stalwart, active man, the full master of all the arts and sciences spoken of as necessary for the instruction of our swarm of young farmers. He should be a young man himself, full of enthusiasm, whose busy life should include every detail of management on this farm of, say, five hundred acres, inspiring and directing its schools, laboratories and workshops as well as the labors of the farm and garden. He should be assisted by a professor of the English language and literature, by a professor of mathematics, a professor of geology and mineralogy, a professor of chemistry, a veterinarian such as Youatt, a professor of physical culture and gymnastics, a machinist and a horticulturist. With a class of twenty-five lads in their fourteenth year we would start, and then with five hours of labor in the open field and five hours of study, with two hours of gymnasium work, with twelve hours for eating, sleeping and amusement, with perfect hygienic arrangements, the dormitories being so arranged as to exclude rain and snow, only the air having full access at all times; all stimulants, including tea, coffee, alcohol and tobacco, not being allowed on the premises because nervous depression follows nervous exaltation; besides, they interfere with digestion and destroy profound sleep. We should cultivate the farm, grow crops and raise farmers at the same time. The milk, butter and cheese from our dairy should go to market and establish its reputation A No. 1. Our fruits of all kinds and vegetables should follow as soon as we could get them started. In addition we should grow enough of the cereals and grasses to feed our stock, preferring rather to buy feed than fertilizers, though we should use them freely when circumstances required it and it was profitable to do so. At the end of our first year, with our routine and discipline thoroughly established, our first class would become sophomores and twenty-five freshmen would be admitted, and so on for the third and fourth year, when our numbers would be full.

At the end of our fourth year we should graduate our first class of twenty-five thoroughly accomplished farmers, perfect in physique, longing to grapple with the problems of life, perfect in the art of farming, familiar with all that had been written on the subject, able themselves to write on any topic and give the results of actual practice, thoroughly accomplished in all the sciences relating to agriculture, well versed in English literature, skilled in mathematics, upright in morals, economical and temperate in their habits. Such men would be ornaments to society, would be able by their skill and labor, in this country of cheap lands, soon to purchase a farm and establish themselves. This is just the kind of agriculturists we need to renovate our worn-out soils, to dignify our profession, and to place our country first in the list of nations.

[An institution such as is here sketched is entirely practicable, and would prove a blessing to our State.—*Eds. A. F.*]

Our French Letter.

Agriculture in Algeria.

Messrs. Editors American Farmer :

Contemporary events having brought Algeria to the front, a few notes on the agriculture of that French colony may not be uninteresting. Since Algeria came into the possession of France in 1830, not more than six thousand French, on an average, have emigrated there per year. This slowness is due, not only to the innate repugnance of the French to quit the mother country, but also the insecurity for life and property in the colony; as frontier emigrants must be protected by military camps, and the difficulty of purchasing good lots of ground from resident Arabs, who apparently love their soil as much as they proverbially do their horses. Of the latter there are two distinct races, the Barbary or African, and the Syrian or Asiatic. There are several crossings, but too few or too unsuccessful to be taken into account.

The Barbary horse is about sixty inches high, very irregular in form; the pasterns very long, the hoofs very narrow, which produces the infirmity of halting, and very common when these animals are imported. The Syrian is the ideal of the Arab saddle horse; its points are generally irrepachable, and its height is superior to the Barbary. Both races well deserve their reputation for strength and endurance. They are as sure-footed as a Spanish mule; they will traverse, without making a false step, ravines of loose stones, and rocky surfaces intercrossed with branches; rough or favorable paths taken together, these horses will do their thirty-five and sixty miles day after day, demanding only a little green food and drinking but once. There are eight principal horse fairs in Algeria, where a pick can ever be made out of five hundred animals. The Arab pays little attention to keeping up a breed; possessed of a mare, he allows her to be covered by the first stallion at hand—his object being merely to possess a foal. The government, with the view of methodizing the production of horses, has established studs, where first-class Syrian and Barbary stallions are kept; at the same time it gives prizes for the best stallions of any cross-breed. No marked progress can be recorded respecting black-cattle; a few Durham-Arabs are to be met with, but the general breed is the Iberic, whose live-weight varies from four to six cwt. when fattened. They are very well shaped, the skin supple—proof of an aptitude to fatten; the hide is generally black, the loins, chest and muzzle white. For labor, the Morocco ox is the favorite; its bones are larger, and the skin less supple than the Iberian breed; the color is generally red; when fat, the animal weighs eight cwt. Although the sheep comprise two well-defined breeds—Asiatic and Soudanic—they are classed by the natives under the generic title Barbary. The parent type is famous for enormity of tail, whose substance, scientists assert, resemble butter rather than suet. Breeders endeavor to effect crossings to diminish this excessive tail, which develops at the expense of the other parts of the body. These sheep when

fat attain a live-weight of ninety to one hundred pounds; the flesh is rather hard, but tastes well. The fleece is coarse, contains no grease, and that of an adult weighs six and a-half pounds. Algeria sends 600,000 head of sheep annually to the French market, but this supply depends on the season not being too dry—droughts being drawbacks to the colony. Attempts are being made to cross the Barbary with the Merino; no marked results have been yet attained, which is the more strange, as Algeria is the cradle of the Merino race. Until the nomadic Arabs be civilized, no sheep runs can be founded. Ostrich farming is being successfully tried; a pair of adult birds furnish thirty eggs yearly which are hatched by an incubator; in a short time the young birds represent each a value of 1,000 francs. Vine culture is rapidly progressing; on an average a good acre of vines produces 720 francs of wine per vintage. Three years after being planted a vineyard is remunerative, and good yield at the expiration of five years repays all capital, including even the fee simple of the land. The climatic conditions of Algeria are favorable to the vine, but the preparation of the vine is still in the rudimentary stage, and no serious attention is paid to speciality of culture. Land is purchasable at twenty to eighty francs per acre, and rented at two to eight francs; near towns market gardeners pay from eight to forty francs per acre. Farms are chiefly rented for three years without conditions; the tenant consequently racks the soil as much as he can; the *metayage* plan is, however, more general. In this case the proprietor and tenant, after deducting the grain necessary for sowing, divide the harvest, share and share alike; the tenant disliking manual labor as much as does the landlord, sublets his right, and thus becomes a middleman. As there exists not a shred of confidence between him and the proprietor, the contract only lasts for a year. The landlord supplies the use of the implements and advances any necessary monies; the tenant supplies his labor. With the natives, a few head of cattle is all that links them to the soil; everything with them is primitiveness itself.

Agricultural Schools in Paris and Berlin.

Paris and Berlin have each an agricultural university of the first order. Respecting the relative educational value of either, it is admitted that the French college has a more systematic and co-ordinated programme of study, but that at Berlin is vastly superior in all that relates to the practical illustration of lectures, such as richly furnished museums, laboratories, &c. The German government has refused nothing to luxuriously provide the material for the highest agricultural education.

Culture of the Sugar Beet.

The cultivation of beet occupies a large amount of public attention. France produces about one-fifth of the total European yield. About five per cent. of sugar is obtained from roots grown in this country, while in Germany and Austria the return varies from $8\frac{1}{2}$ to $8\frac{3}{4}$ per cent. The reason of this difference is due to French farmers aiming at once to secure roots that will simultaneously repay the sugar manufacturer, the

distiller and the stock fatterer. Large roots are the terror of manufacturers, while growers complain the factories do not offer prices to encourage the raising of smaller sized ones. In Belgium agriculturists assert they are ruined by accepting the seed supplied by the factory proprietors; however, there can be a serious difference in the richness of a variety of beets as much even as $6\frac{1}{2}$ per cent. The aim in sugar beet culture is to plant in narrow lines, moderately manure, secure a root about two pounds weight, of a variety globular, not growing much above ground, with few roots and hence easy to lift, and subsequently to manipulate. Of this season's crop, sowings are late and vegetation three weeks in arrears; the advantage, however, is clearly in favor of early sowings so far.

Another moot point now occupying prominent attention: What is the best base for determining the commercial richness of beet? The majority advocate selling according to density, but Professor Petermann, of Belgium, leans to the system of saccharine richness. In the former plan, the better theoretically for all interested, the chief difficulty lies in its application. M. Pagnoul, an authority in the dispute, lays down a juice density scale, commencing at 4.5 degrees and rising by one-tenths to 7. A density of 5 degrees would represent a saccharine richness of 9.5 per cent. and a yield per acre of twenty tons, at the price of sixteen francs per ton; a density of seven degrees, fifteen per cent. of sugar, a return of thirteen tons per acre at a price of thirty-eight francs per ton, being a monetary difference in favor of the latter of ninety-four francs per acre. A juice of a density below five degrees becomes unremunerative, not only on account of containing less sugar, but more foreign matters detrimental to the extraction of the sugar. The density could be estimated by having an independent official at the factories, who would determine it from half a dozen of average sized roots, three to be selected by the fabricant and three by the farmer. Some agriculturists, in order to increase the density of the juice, have recourse to the fraudulent plan of applying nitrates to the beet during the last stage of its growth; this induces fresh vegetation; the root augments and also the leaves, but at the expense of the sugar in the tissue of the roots, so that the density which was five degrees falls to four, and the fabricants quickly discover the fraud. M. Pagnoul advocates the raising of eleven beet roots to the square yard, each root to weigh about fourteen ounces, and the yield per acre to be sixteen tons. A ton of beet carries off from the soil thirteen pounds of alkaline salts. Manures for beet ought to be of a nature to be rapidly assimilated, capable of acting at the commencement and middle state of the plant's growth, during the period when light is strongest and longest and so more favorable for the production of sugar. A slowly acting manure produces the same effect on the roots as the fraudulent application of nitrates just described. To avoid such a result, German farmers apply farm-yard manure to the preceding crop, employing a limited dose of nitrate of soda and super-phosphate, following the wants of the soil, before sowing. All that tends to produce a

rapidly developing root can only be favorable to its saccharine qualities.

From the result of various experiments M. Lacroix has found that the most profitable manner to employ dried blood and bad meat as manure is to mix them with sulphate of ammonia.

F. C.

Paris, May 21, 1881.

The Crops and Season in Virginia.

Messrs. Editors American Farmer :

In this region a number of heavy rains prostrated much wheat. I hope most of it will get up; if so, and not injured by rains or rust, good crops will be made.

As to corn, "winter lingering so long in the lap of spring" and the rains forced the farmer into unusual lateness in his preparation. In former times, when pressed in that way, they would (what they called) "list," *i.e.*, plow two furrows each way at proper distances for planting and plant the corn in the cross, and afterwards break up the field. This our farmers do not fancy, and stuck (although interrupted by rain often) to the plow until at last, though late, they succeeded in planting; but here disaster again met them—the seed they planted did not vegetate. Many entire fields had to be planted over, and but very few fields stood as well as usual; then to replant while thinning, with rain interruptions, makes it so very late that but little—in many cases no—cultivation can be given it before harvest. Heretofore three plowings were given it before harvest, it being considered perilous after to work it, but this year its cultivation must be after and its lateness will remove that peril. But another misfortune threatens it: if not ripened before frost it must be destroyed; and the loss of a corn crop would be one of the greatest disasters that could befall an agricultural community. I suppose the seed corn had not ripened enough in the shock when the hard weather destroyed its vegetating quality. Farmers ought to be particular in ripening their seed of all kinds.

I have heretofore suggested a turnip or root crop by farmers owning sheep, which, fed to them during snow, would doubtless save many lives. As a homely old saying has it (I think I have quoted the time correctly):

"Sow the fifteenth of July,
And turnips will come, wet or dry."

J. W. WARE.

Clarke County, Va., June, 1881.

The Times, the Seasons and their Requirements.

Being one of the people, a farmer, I take up the pen to say a kind word of encouragement, with now and then an appeal to the past, with hopes of the future. I also wish to strengthen the faith of the timid. I believe all the good faculties of man were given him to put them into practice as well in farming as any other business. When the farmer is named—it is the

honest farmer—let him not be ashamed of it. "Honesty is the best policy." If he is industrious, he is right and does his duty. All he need require is an open field and fair play. He wants nothing more than his dues, and is willing to pay a fair price for all he buys. Give him his own and he asks no boot. Therefore, when I speak to farmers, I speak as I believe to honest, industrious and patriotic men, men who when they recline under their own vines and fig trees there are none to make afraid or ashamed.

To achieve success one need only to pursue the even tenor of his course as an honest man, to obey the dictates of an enlightened conscience and to love his neighbor as himself, prove all things and hold fast to that which is good. About this time the anxiety of the farmer comes to the stand point—the result of his labors can measurably be guessed at. What have been his misgivings may turn to be realizations—losses or gains. In either case there is relief, doubt having terminated. After we know results and doubt is vanished we go on the accustomed routine. There is a pleasure in commencing anew, if only to pass through the routine and renewing the same line of operations. We are pursuing like nature does—seasons—through hot, cold, wet or dry. In nature there are variations—in seasons there are changes—so in times "the times change, we are all changed." The corn is up, though in many places it was hard to get a stand. The grass is promising. The wheat is come into head and advancing to maturity. In the best of years the good crop is not universal, exceptions occurring in some locations.

As a general thing Providence is munificent, but with it as with most things, circumstances alter cases. It's a bad rule that does not work both ways—for if it is bad in one place it may be good in another, or if it helps one it may hurt another. We have heard that it was an ill wind that blows nobody any good. In whatever circumstances we may be placed, whatever may happen—good, bad or indifferent—let us do our best, and trust to Providence for the rest. Every one perceives in his experience that many changes take place and continue to take place. It will be so to the end of time, it was so yesterday, it is so to-day, and will be so forever. We are almost bound to believe that this earth was made for man and mankind for it. "Go ye into all the earth and make your living by the sweat of your brow." It likewise seems to carry out the axiom that men are dependent on one another. One man cannot do everything, nor his wants be supplied without assistance from others. So the producers and consumers are dependent on each other. So with regard to the sexes. God said it was not good for man to be alone. For Adam he made Eve—she was the last best gift to man. It was a good beginning, and may it never be a bad ending. These things are well known, but in the progress of events mankind must revert to first principles, he must appeal to history for precedents, it sometimes repeats itself. We should not condemn things because we do not understand them. The thing condemned to-day may be the thing approved to-morrow. Soon harvest will be on us. The harvest is the result of our plans, works and appliances. Our friends,

the inventors—the manufacturers—have spread before us everything that is needed for cutting and binding it. Never were implements more perfect for the harvesting.

PHILO.

Jefferson Co., W. Va., June 9, 1881.

Leaks.

Messrs. Editors American Farmer:

Two farmers were engaged in conversation on farming and farm matters and were looking at some pigs in a pen. Said one: "I do not know how it is that these pigs do not thrive and grow as they ought; they get all they can eat and still they cry for more." The other one looked around carefully for a few minutes and said: "I know the reason, and a good one it is." "What is it?" "Look here in this corner of the trough and you will find a leak, which wastes more than the pigs get. First stop this and I think your hogs will stop asking for more." "I see the point and will remedy it at once." They went to the stable and found one of the horses pawing the ground as if he wanted something to eat. The same remark was made about them as was applied to the pigs, and after a careful look a leak was found in the feed trough, and in place of giving the horse his food it went to supply the chickens which were under his feet and which seemed to enjoy the repast very much.

After dinner they adjourned to the wheat field where some of the grain looked well and another part thin and sickly. "How much phosphate did you apply to this part that looks so well?" "Five hundred pounds, and to this 200 pounds." "Don't you think it would have paid you better to have applied the same quantity, 500 pounds, over all, and thus secure a good crop of wheat and a good set of grass? If instead of stopping up this leak of the phosphate and stopping that in the trough, you had opened it more, I think you would have been more benefitted. After this look carefully to small leaks for the stock, and open under those in the drill and you will have fatter hogs and horses, and the wheat and grass will fill your granaries, and your land will laugh and grow fat, and you will not complain that the phosphate was of no benefit because you put so little on." Moral: Stop the trough leaks, open those under the drill.

J. A. C.

Deer Creek Farmers' Club.

This club met on Saturday, June 11th, at the farm of Mr. John Rogers, near Fountain Green.

Messrs. John Moores, A. M. Fulford and Wm. F. Hays were appointed a committee to make the customary inspection of the farm and premises. That duty accomplished, upon the re-assembling of the club Mr. Moores said that it looked like presumption to criticise the farming of Mr. Rogers. The reports had generally been so favorable that the public might conclude that the club had gotten to be a sort of mutual admiration society. He did not consider, however, that any of the reports had gone too far in the matter of praise, and certainly they could not do so in the case of Mr. Rogers. He is regarded as a pattern farmer. He keeps everything around

him in first-class order and works his farm so as to make money out of it. He had bought and paid for his farm twice. He earned it by his work before his father's death and bought and paid for it afterwards. This fact should encourage younger farmers, some of whom never pay for their farms once. Here you see no fancy farming, but everything a farmer ought to have. The wheat and grass are fine. The latter is too good, and will be difficult to save. His horses are in admirable condition, and his 22 stock cattle are thrifty and look well. Mr. Rogers farms with fewer horses than any farmer he knows. When Mr. Rogers bought the place it was called a small farm, but, judging from the crops raised, it is the biggest farm in the neighborhood. Mr. Rogers has made considerable improvements to his house since the club last met here, and there is now not a building on the place that was here when he bought it. He has 140 acres of land in the home place, 40 of which are in wood.

Mr. Fulford remarked that the chairman had gone over the subject thoroughly, and said he had had his eye on Mr. Rogers' farm for a number of years and had noted the many improvements.

The subject appointed for discussion was: "Is a low rate of interest of benefit to the community?" Various opinions were expressed on the subject—but, as remarked by one of the members, "the question has baffled financiers for years and was likely to baffle the Farmers' Club," and consequently we deem it unnecessary to go into the details of the discussion.

The club adjourned to meet at Mr. Wm. D. Lee's, on Saturday, July 16th. Subject: "Early or late plowing for all crops."

A Trip to West River, Maryland.

Messrs. Editors American Farmer:

To a resident of Baltimore county traveling from the primary rocks of his home to the tertiary soils of lower Maryland, the contrast is very striking, and is heightened still more at this time of year by the fact that we are grass-growers and much of our land is under the sward and therefore green, while in the tobacco-growing portions of the State one-third at least of their land is plowed. Thirty years ago I was accustomed to regard the lands of West and South rivers as the garden spots of Maryland. At that time fine crops of wheat, corn, tobacco and clover covered the ground, and the people were living in plenty and even luxuriance. Now their clover crops are replaced by fields of sorrel interspersed by small oases of white clover, on which their stock find a scanty subsistence. In traveling from West River landing to Herring creek church and thence to Marlborough station, I did not see as much grass as I left at home on a ten-acre lot. Their crops of wheat do not look as if they would pay for seed and harvesting, and I was told that in 1880 they did not raise wheat enough to pay their taxes. This they attribute to the failure of the clover crop, and say that their lands are clover-sick and will not produce the crop any longer.

If this means anything it means that their soil is exhausted of some element it formerly possessed, and the practical question for them is,

What is that element? At home we should go to liming, and feel pretty certain that we should remedy the defect; and this course deserves a trial with them, but the result is not so certain. Their land was under the ocean some millions of years after ours had emerged, and in plowing their fields fragments of shell, pieces of coral, and flakes of indurated marl abounding in marine remains are turned up, leading us to infer that there is lime enough in their lands. Perhaps fall plowing, and turning up an inch or two of new soil by going deeper and exposing it to the winter frosts, would assist in decomposing these materials and render them available for the growing crop. It seems more probable to me that they have exhausted their nitrogen. It is still a mooted question whether the atmospheric nitrogen is at all available for the sustenance of plants, and experience points out the fact that the bulk of nitrogen must come from the soil, even if a small portion can be supplied by the air. The failure of the clover crop may therefore be from the failure of nitrogen; if so, stable manure would be their remedy. As it is, their experience seems to demonstrate a fact long since known to us, that under a three-field system clover alone will not keep up the fertility of the soil, and it has become a maxim with us, that if we wish to increase the productive capacity of our lands we must keep as much stock as we can feed and sell butter and fat—that is air and water—keeping at home the nitrogen and phosphate in the manure.

It seems that our West River friends can neither lime nor manure. Though lime might easily be procured from the river or the bay, their roads are bad because they have no stone to make them with, their teams inefficient, and, all unaccustomed to hauling as they are, it seems to them a herculean job. Their land is not a dairy region; they lack those cold and perpetual springs which, issuing from among the rocks or at the base of our hills, are so frequent with us. Most of their land is rather light for blue grass, though white clover grows well with them. It is not, therefore, a grazing country. They have never tried fattening cattle or sheep in winter, because they make no hay and have no fodder except their cornstalks. They might build silos and raise ensilage enough to feed to stock, and thus make manure, but all this is new to them, their energies being concentrated on tobacco—a poor reliance, as it seems to me, inasmuch as they have failed, six years out of the last ten, to grow a crop; and as they have to hire additional labor for this purpose at the beginning of the year, and this labor must be paid, crop or no crop, such frequent failures make it a losing operation. They have no faith in commercial fertilizers, though the only good crops of wheat I saw down there were those upon which fertilizers had been used.

A railroad now projected through their country, if completed would, I think, relieve them of many of the difficulties under which they now labor, by affording them facilities for transportation of lime and other fertilizers, giving them rapid transit for the fruits and vegetables to the growth of which their soil is nicely adapted, thus enabling them to change their crops, re-

lieving them of the necessity of putting all their eggs in one basket. This change would imply a change of labor, as the colored laborers on whom they depend learn new things slowly. The new *régime*, however, with cheap lands, would soon bring in a German population, who would either instruct or replace the colored man and thus insure prosperity.

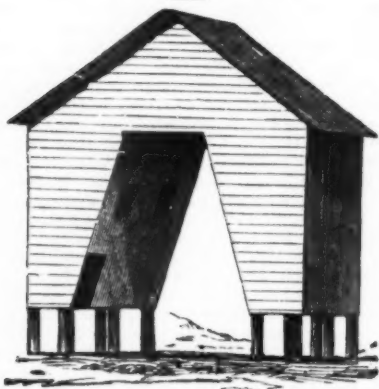
Without the lime, without the manure, and without the railroad, they must abandon their three-field system. I should begin by fencing off a permanent pasture near the dwelling-house and barns, sufficient for my stock, and this is the only inside fence I should have on the place. This I should sow in orchard grass, which flourishes on their soil and would soon be supplemented by white clover, which grows spontaneously, and perhaps after the ground had been thoroughly tramped, blue grass would come to its aid. The rest of the land I should divide into four equal parcels. The field in tobacco and corn I should plow in the fall two inches deeper than ever plowed before; the following May harrow well and sow in peas, to be turned under just as the pea begins to form, and followed with wheat sown October 1st and rolled with a heavy roller after sowing timothy seed. In the spring sow clover and roll again. After cutting my wheat I should examine my grass crop. If the rest were good I should let it stand for hay next year; if it failed to set I should spend no time in unavailing regrets, but plow down the stubble and sow again in peas; plow down October 1st and sow in rye; plow down the rye in May and sow again in peas; plow down in the fall, cross-plow in the spring, and commence again with corn and tobacco. The second rotation, if not the first, I should have plenty of grass to feed all the stock I could make profitable. I should not hesitate to use artificial fertilizers on the wheat at least. I should then have a field in tobacco and corn, a field in grass, a field in wheat, and a field in peas. With this system they might hope to improve their lands, now hopelessly degenerating under the three-field system—a system that attempts the impossible, and without liberal supplies of manure would subject the richest lands in the State to rapid and cheerless deterioration.

A more noble, generous, and hospitable people never inhabited any country, and no one would delight so much in their prosperity as your humble servant,

LECTURER.

[It is taught that "faithful are the wounds of a friend," and we know the writer is a true friend of the section he criticises, a section which naturally has many advantages which ought to be made more of than at present by a change of system such as he advises, or some other adapted to restore its prosperity. We should be glad to hear from some of our friends directly concerned. No community in our State contains more intelligent or more practical farmers than that under consideration, and those who have found "a better way" than the generality of their neighbors should not hide their light under a bushel.—Eds. A. F.]

An Ohio Corn-Crib.



This is an illustration of a very convenient and substantial corn-crib, with a wagon-shed between. Such a crib can be built of any size, and filled with grain without the least sign of weakness. One side is a brace for the other, and the more grain there is in it the firmer it will be. It is useless to explain how the timbers should be put together and where every door should be cut when one glance at the illustration shows all this.

Live Stock.

Breeding Butter-Producers — Recent Sales, and Accessions to Baltimore County Herds.

Messrs. Editors American Farmer:

The high prices realized at some of the spring sales of horses and cattle when sold for breeding purposes, show that a great deal of money has been and is being invested in breeding in this country, and yet how many so-called breeders are ignorant of the elementary principles of the art. How many there are who call themselves breeders, who simply promote the congress of the sexes without any clearly defined purpose. "The art of breeding consists in *changing* the conditions of life, and *regulating* the reproduction of animals, &c.," and no one is entitled to be called a breeder who does not seek to regulate this change for some good end, either for fancy or economy.

The two great laws of heredity and variability are just so fixed and determined as to enable man by selection to build up what he wants, to a very great extent. Let him first fix on his ideal and then turn his attention to variations in that direction, and by careful selection and mating much may be done. The building up of a race of great butter-makers seems to be the end to which much time and money is now being devoted. The breeding to this end is much more difficult than in many other directions.

The breeder whose ideal is a peculiarity in plumage (as in certain varieties of the pigeon or fowl), or of form (as in the shorthorn or other flesh-forming cattle), or in producing sheep with a peculiar fleece or shape, or the race-horse, can select animals for crossing from both the sexes having the desired peculiarities, whilst the breeder of butter-makers is almost entirely at sea as to the selection of his males. The rule that has been formulated for him—to select males good as individuals, and from *great performers*—is good enough as far as it goes, but as it is well known that the daughters of great performers are frequently anything else but great performers themselves, it is reasonable to suppose that it is the same with the sons. Let breeders select the best they can according to this rule, and then wait until his daughters begin to come in and subject them to some careful system of testing, and if they are better than their dams he has a prize in his bull, and should by all means hold on to him as long as he is useful.

The practice of killing off Jersey bulls at an early age (when two or three years old) which prevails almost entirely on the Island of Jersey, and to a very great extent in this country, is one that must result in great loss.

Apart from the fact that no race of animals can maintain great constitutional vigor which depends for its propagation on very youthful sires, the practice results in loss in other ways. How often has it happened that after an animal has been slaughtered it is found that he possessed that "rare gift of nature, the power to improve his kind," and much would be given to have him brought again to life. Consider what the world would have lost had old Messenger or Lexington been slaughtered in early life.

The New Englanders have been given the credit for being exceedingly long-headed and acute, particularly in the matter of dollars and cents, and yet we have two notable instances of their lack of shrewdness, in the matter above mentioned, before us at present. Old Champion of America, whose daughters are almost invariably better than their dams, and who are now coming to maturity and attest the immense value of their sire as an "improving cross," was sold from New England to Mississippi, a few years ago, for a very low price, and I presume it would take thousands to have him returned to his native heath. His present owner would scarcely part with him at any price. He is still vigorous, although eight years old. Another instance is that of Rex, 1530, whose daughters are grand cows and are eagerly sought after by all careful breeders. He also has left the East and gone West, and it is reported that since his arrival there his owners have refused as much as \$2,000 for him. Another instance is the bull Mercury, now thirteen years old, who sold one year ago for \$1,000 and would now bring much more, although we must confess the evidence of his prepotency is in our opinion extremely meagre. This is a subject worthy of careful reflection and discussion. I shall probably return to it at some future time.

I desire to call your attention to some recent purchases for Baltimore county before closing.

I attended the sale of imported Jersey and Guernsey cattle at Herkness & Co.'s bazaar, Phil-

adelphia, on the 15th and 16th June. These cattle, comprising about seventy-five head each of Jerseys and Guernseys, were imported by Mr. Samuel C. Kent, of West Grove, Chester county, Pa. They were selected by Mr. Willis P. Hazard, of West Chester, Pa., Secretary to the Pennsylvania Guenon Commission, and the author of a small volume on "How to Select Cows." The Guernseys were a pretty fair selection, but with the exception of a few animals the Jerseys were anything but a choice lot.

The prices realized were good, and it seems the demand for Jerseys is so great at present that almost anything will bring a price. I noticed among those present Messrs. J. E. Phillips, G. S. Watts, Andrew Banks, and T. Alex. Seth, of Baltimore county. The Jersey cows averaged \$341.45 the highest figures being—Bettina 2d, \$1,300; Madeline, \$1,300; Queen of the North, \$1,200; and bull Dido, \$500, all of which were purchased for Hon. Samuel J. Tilden; and Regina 4th, \$1,450, by Dr. Howe, Bristol, R. I. The highest prices paid for Guernseys were—Type 2d, \$1,050, and bull Dick, \$600, by Hon. S. J. Tilden. Mr. J. E. Phillips bought a bull calf for \$100, and Mr. Gerard S. Watts secured three of the choicest cows for his already fine herd of Guernseys, viz.: Polly 3d, \$160, a good two-year-old; Daisy, \$405, an exquisite heifer two and a half years old, with fine Flandrine escutcheon and the richest skin. She is altogether a most promising heifer, the best of the lot in our opinion, and worthy to form the acquaintance of Mr. Watts's *extra fine* young bull Earl Barker. He also secured the nine-year-old cow Brownie for \$600, a magnificent animal, and one from which we predict great results.

The prices realized for the Guernseys show that they are rapidly coming into favor, and too much credit cannot be given to Messrs. Phillips and Watts for their efforts to establish choice herds of these great butter-makers in Maryland. I have promised to visit in a few days these herds, and will then give your readers an account of their progress.

I have to record purchases of Jerseys by our Baltimore county breeders since my last as follows:

By J. E. Phillips, Esq., Arawana Stellaria, 6986, the dam of his fine young bull Ned Ives 2d, 5470.

By Andrew Banks, Esq., imported cow Jolie, purchased at the sale of imported cattle in Philadelphia 12th May last for \$310, a very promising young heifer (two years old), whose c. c. sold at same sale to S. M. Burnham, Esq., of Saugatuck, Conn., for \$200.

By Mr. T. Alex. Seth, cow three years old, Queen of Fawley, sire Dumbarton Davy, 2113, dam Daisy 2d, 1186, and her c. c. Annina, by Luther of Baltimore 2809.

I have a letter from a prominent Northern breeder which says: "From the number of letters of inquiry I am receiving from your county, I think there will be some sharp competition at your fall fairs." This is gratifying news, and I hope it may be true; but why are you so sly, gentlemen? However, we will curb our curiosity and expect an agreeable surprise at show-time. X.

Cotswold Lambs and Summer Management.

Messrs. Editors American Farmer:

For the elevation of Cotswold sheep and to promote the prosperity of a flock, to keep them healthy, etc., allow me a short space in your valuable journal, which is read by very many intelligent readers, of whom I have a fine opportunity to judge, if I can correctly do so, as my correspondence with them is extensive.

I have weighed several fine lambs of the following ages and weights, which I think will compare favorably with the Southdown or any other variety: Ram lamb, 3 months and 2 days, 90 lbs.; ram lamb, 3½ months, 85 lbs.; ram lamb, 3 months and 10 days, 85 lbs.; ram lamb, 3 months and 8 days, 80 lbs. This last lamb's mother was killed at shearing-time, and he has taken care of himself for the past six weeks; he was very promising and is now a beauty. I have others of about the same weight.

To guard against disease, tar the noses of your flock; it keeps the gaffly away and prevents grub in the head. Shear by July 1st all lambs intended to be kept over as breeders; it seems to promote their growth, and certainly is more comfortable for them. I have seen sickly lambs afterwards take a fresh start. Try a few. Don't turn into the wheat stubble until the wheat has all been eaten off by other stock, and see that there is no poison vine growing around your fields; and should any of them evince signs of pneumonia, dose them with warm lard or castor oil, work off with Epsom salts, then saturate their chests daily with turpentine. Do not by any means allow them to lie under the same shade-tree all summer without scraping off the ground and filling up with fresh dirt, and above all things give them a good range and plenty of timothy or blue-grass sod. It does not pay to keep sheep except in mutton condition, when they are always fit for the butcher, will command first-class prices and shear double the quantity of wool that a poor sheep will. Rams intended for use this fall should be got in place at least one month before needed, in order to become acclimated if brought from a distance. In such case they will prove more fertile.

ED. C. LEGG.

Kent Island, Md., June 20, 1881.

Raising Hogs Profitably.

Messrs. Editors American Farmer:

Feeding swine has been looked upon as rather a degrading employment ever since the Prodigal Son found it necessary to resort to it, but it is not as distasteful to us as it was to the Jews, and the time has come when the happy possessor of a herd of pure bred swine is held in higher esteem than was the Prodigal Son by his generation.

How to raise hogs profitably is of more importance to us than the subject of degradation. With the products of the West to compete with, and the high prices of feed, there has been very little or no profit, except for men who had some feed that might otherwise have been wasted.

In order to ascertain the profit or loss of the mill it becomes necessary to keep an accurate account of the feed used for the hogs; therefore I am able to say with some accuracy what it costs to raise pork. I have been feeding the best breeds, giving them clean, warm quarters, plenty of fresh water to run to at pleasure, in an apple orchard with plenty of grass and exercise, with sufficient feed to keep in a condition to butcher at any time the price suited me. With all these comforts, (more than most hogs get) I have found very little money in them, but with the present prices they can be made pay.

I have found that it requires an average of four pounds of feed per day to keep a pig two hundred days; at one cent per pound he will cost eight dollars. I have found this the best age to sell; they will then weigh one hundred and seventy-five pounds, if good ones.

We consume a great deal of Western meat that could be raised here if the prices keep up. Our climate is adapted to them; a very small percentage die when properly cared for. They do not receive the attention from farmers they should. No one can afford to keep a long-nose, open-made, half-fed hog; he will bring you more in debt the longer you keep him. I have found well bred stock of any kind is better for profit, if you can get it at a moderate cost.

Montgomery Co., Md.

W. A. MANAKEE.

Pare the Toes of Colts.

It is not generally recognized how much harm comes to horses from the simple overgrowth of the toes; and yet, in the case of young and unshod horses especially, hardly anything is more destructive to their soundness and permanent utility. Judging by the number of colts turned out everywhere with the whole winter growth on their toes, there seems to be a surprising amount of ignorance on this matter; and it becomes the more necessary to draw special attention to the need of paring.

A good average slope for the front of a healthy hoof is one forming an angle of 45° with the ground on which it rests. In other words, if a perpendicular line were drawn upwards from the toe, the line of the front of the hoof would be midway between such vertical line and the flat surface of the sole or ground. But the average foot grows far more rapidly at the toe than the heel, and wears off much more slowly. The heel, too, as it grows, turns inward, so that even with an equal growth, it never projects as does the overgrown toe. As the foot increases in length, therefore, the effect is shown and felt especially at the toe, and with every addition to the length of the toe, the front of the foot and of the pastern recedes further from the vertical position, and approaches nearer to the horizontal.

The extra strain consequent on the increased length and obliquity must be borne by the posterior and lateral ligaments of the fetlock and pasterns; and as these latter come from the sides of the pastern bones, the consequent injury determines inflammation and bony deposits on the sides of the pasterns. Similarly, the back sinews,

which act as supports to these joints behind, become sprained, thickened, and shortened, inducing knuckling over at the knee and general unsteadiness of the limbs.

In paring, remove the whole projecting lower border of the hoof wall down to the junction with the sole. The greatest danger is from the toes; but overgrown heels, curled in on the sole, imprison masses of hard, flaky horn, bruise the sole, and determine corns and a train of evil consequences. The process should be attended to in winter as well; but it is especially in summer, when the clot is running at liberty in the fields, that the effects of undue strength are to be feared.—*National Live-Stock Journal*.

How to Feed Pigs and what to Feed them on.

The nice point in growing pigs is to keep them growing. This is easily accomplished for the first three or four weeks by feeding the sow bountifully upon nourishing slops; but the time comes very early in the life of the pig when it is impossible for the sow to supply nutriment for a large litter as rapidly as they are capable of assimilating the food, and if they have not in the meantime been taught to eat for themselves, there comes a period of retarded growth. I usually prepare for this by providing a trough apart from the sow, to which the pigs can have access, and commence by giving them a little new sweet milk, which they soon learn to drink greedily; this is gradually changed to skimmed milk, and then to sour milk, buttermilk, or whey, with crumbs of bread, scraps from the kitchen table, etc. As the pigs grow older, I feed corn-meal cooked into a mush, and mixed with whey, skimmed milk, and other house slops, and, finally, soaked corn; by which time they are old enough to take kindly to grass and clover, and this with the soaked corn will keep them growing rapidly.

Do not depend too largely upon corn, but provide grass in abundance. A most excellent food for the purpose of increasing the flow of milk may be prepared by grinding corn and oats together, in about equal quantities by measurement, and making a slop of the mixture. To this may be added a little oil-meal with profit. Ground rye, barley, or wheat may be substituted for the corn or oats, and a mixture of all these grains will make an excellent diet; but don't forget the grass. If you are so situated that you can't give your sows access to a good pasture, cut some grass—clover is the best—and give it to them every day. Ground peas make an excellent food. Don't depend upon any one thing, but use a variety.—*Cor. Nat. Live-Stock Journal*.

The business office of the American Jersey Cattle Club has been removed from Newport, R. I., to No. 3 John street, New York, where all communications should be addressed to the present secretary, Mr. Thomas J. Hand, one of the original members of the club and long its treasurer. No one, says the *Country Gentleman*, was more active or influential in its organization, or has been more closely identified with its prosperity and success.

The Dairy.

A Milk and Butter Test.

Messrs. Editors American Farmer :

Enclosed I send you a seven-days' milk and butter test of my Jersey cow Troth, 6139. She was dropped June 30, 1877; sire, Hornbeam, 2123, by Marius, 760, out of Emily Hampton, 1912; dam, imported Blondette, 1817. You will perceive that she does not boast of any of the so-called noble blood in her veins, such as that of Alpha, Pansy, Rex 3d, etc., and consequently is outside of the charmed circle.

On the 17th of February, 87 days before dropping her last calf, she tested 5½ lbs. butter in seven days, and she milked up to the time of calving. In fact, she has not been dry since she dropped her first calf, though I have tried to give her a rest both times.

She calved on the 15th of May, and on the 17th of June I began her test. The first seven milkings she had no feed but what she got on a second crop orchard grass pasture, which was harvested only a few days previous, and therefore was not very good. The last seven milkings she was fed, in addition to the pasture, three pints of corn chop night and morning. She came in season during the test, which of course injured the milk to some extent.

On the 17th she gave.....	28½ pints.
" 18th "	28½ "
" 19th "	29½ "
" morning of the 20th.....	13½ "

Making her seven milkings on pasture alone, which churned 6 lbs. 11 oz. of well-worked butter. I then commenced giving her the corn chop.

The evening of the 20th she gave...	15½ pints.
On the 21st she gave.....	30½ "
" 22d "	30½ "
" 23d "	31½ "

Which churned 8 lbs. 1 oz. of butter.

I have seven more milkings on chop and pasture which are not yet churned, but from the quantity of cream as taken up to the present time, she will beat the 8½ lbs. a little, I think.

The above test was under the direct supervision of my wife and myself (not left to hirelings), and we will, if requested, make affidavit to the correctness thereof. CHAS. E. HAND.

Baltimore Co., Md., June 27, 1881.

Keeping Butter.

There are two ways, says the *Live-Stock Journal*, for butter-makers to get over the troubles of the hot season. One system, adopted by some good dairymen, is, not to make any surplus butter at that season, but to have their cows go dry the 1st of July, and come in again in September and October. In this case they produce butter only at the seasons that command the best price, and the cows go dry at the busiest season, giving the dairyman more time for his harvest. Less butter is consumed during the three warm months, and, under the old system, more is made than in any other three months. The second

way is, to make only the very best quality of butter, even in the hot season, and preserve it for three months or more by excluding the air from it.

If butter is put up in the best condition, and kept from the contaminating contact of air, it will come out as rosy in color, and fine in flavor, in October or December, as when put up in July and August. There have been different ways devised for excluding the air; but perhaps the best way is to suspend the butter in strong brine. The butter is put into a muslin sack, and then suspended in a tub 3 inches larger all around than the sack of butter. Where butter is made in considerable quantity, it is put up in sacks holding 100 lbs., and these are suspended in oak barrels large enough to allow of 1½ inches of brine all around the sack. In some cases the oak barrels are made tight at both heads; the upper head has two cleats on the under side, 1½ inches thick; this is to keep the sack of butter under the brine, as it would otherwise rise to the top. The upper head is taken out, the sack put in, the head replaced, and the brine poured through a hole in the head, and, when full of brine, this is plugged. This barrel, standing in a cool place, will keep the butter perfect for many months. The butter is better when put up in granules, only having been washed in brine, but not salted or worked; and when taken out, it is then worked and salted, and will be found as fine as when fresh. The brine excludes the air, and all is preserved.

The Poultry Yard.

By G. O. BROWN, Montvue Poultry Yards,
Brooklandville, Md.

American Bred Fowls.

The uninitiated cannot well understand or imagine to what a great degree of perfection and science the breeding of pure bred poultry has been brought in this country during the last thirty years. Not only does it seem to be the fact that Americans have a natural tact or "gift" for breeding poultry, but that our climate is most peculiarly favorable for it. Nearly all breeds that have been imported thrive as well, and in many instances much better than in their own country. So much so is this the case that in some imported breeds a few years of breeding in this country has wrought such great improvement that they would hardly be recognized by the side of the original importation. This is the fact with the white and brown Leghorn-fowls, which are now as a matter of fact classed, and duly recognized the world over, as *American Breeds*.

It is generally conceded that Mr. Simpson, of White Farms, N. Y., was the first in this country to breed white Leghorns. In 1853 he bought from a young man, who had got them from some vessel arriving in New York harbor, a cock and four hens; where the vessel was from he did not learn. These fowls were somewhat larger than those of to-day and had white legs. During 1860 the first known importation of those with yellow legs came. It is a coincidence worthy of

note that the first known importation of brown Leghorns was also in 1853, which were some fowls bought from aboard a ship in Boston by Mr. Kinney. They differed from the present stock, by having red ear-lobes, and the breasts of the cocks instead of being black, were dark brown spotted with light brown. Mr. Kinney's statements some years subsequent regarding the wonderful precocity, quick maturing, and marvelous laying qualities of the brown Leghorns caused quite a sensation among poultry men. Subsequent events prove, however, that Mr. Kinney's statements were not "exaggerated facts."

The American Dominique is the oldest distinctive breed known to this country; when, or how it is originated, as far as my researches go, unknown.

The Plymouth Rock (by name) was known some thirty years ago, when Dr. Bennet, as they were then bred, thus describes them: "I have given this name to a very extra breed of fowls, which I produced by crossing a Cochinchina cockerel with a hen that was herself a cross between the fawn colored Dorkin, the great Malay, and the wild India. Her weight is six pounds seven ounces. The Plymouth Rock fowl then is really one-half Cochinchina, one-fourth fawn colored Dorking, one-eighth great Malay, and one-eighth wild India. Their plumage is rich and variegated, the cocks usually *red and speckled*, and the pullets darkish brown. They are fine fleshed and early fit for the table. Their legs are very large, and usually blue or green, but occasionally yellow or white, generally have five toes upon each foot; some have the legs feathered, but this is not usual." Mr. Lewis Wright in his poultry book says: "It is only necessary to read the above description to see that this *very extra* breed of fowls, which breed legs yellow, white, blue or green, feathered or clean, five-toed or four-toed, could not possibly last long." The Plymouth Rock of to-day, however, is a very different fowl, though it is yet the production of a cross, viz.: the Dominique and Black Java—and many claim also it has a dash of Asiatic blood, presumably the Malay. Though they now breed somewhat truer, yet unlike distinct breeds, they do not breed true to a feather, as often some of the most noted and carefully bred strains produce chicks with dark legs, and feathered also, and sometimes black or brown plumaged ones. As a general utility fowl the breed has many admirers. The Javas, black and mottled, the former originally imported, but the latter named of American manufacture, are at present both recognized as American fowls. The Javas seem to possess in combination as many of the desirable qualities as is possible for any one breed to carry, and men who have bred nearly all the different breeds unhesitatingly pronounce the Javas superior.

Light Brahmas have been so much improved in this country that instead of our importing stock we do an immense business in exporting. The Light Brahmas, now bred in this country, when sent abroad have astonished the natives, and causing them to ask, "how do they make them anyway?" The Jersey Blue and the Bucks Co. (Pa.) fowl, which many authorities make one and the same breed, were once very popular

years ago, and while the latter named seem to have entirely died out, the Jersey Blues have, within the past several years, again been bred with some notoriety. At one time there was a breed called the "Chittagong" fowl which were quite popular in the immediate vicinity of Philadelphia; it also went under various names, as "Ostrich Fowl," "Turkey Breed," "Booby," &c. It is now extinct. Of the later additions, of American origin, we have the rose-comb, white and brown Leghorns (if they can be considered any addition), being produced by experimental crossing. Then we have another cross-bred production, which is breeding for a mixed breed quite true, and is known under several names as follows: "Eurekas," "Silver-laced Eurekas," "American Seabrights," and "Hambletonians." None of these have, however, been admitted to the "American Standard of Excellence." There is also a breed known as "Erminettes," also a cross of little value or beauty. Among the game fowls, some authorities class the white Georgian as American. I know of no authenticated record of their origin. They are now bred extensively and are a fine and handsome fowl. There are a score or more of games bred throughout this country and claimed to be thoroughbreds, which are merely pitted. We have not yet produced any Bantams; on the contrary the American idea seems to be for "big" fowls. It seems to be a settled fact that this country furnished the foundation for the different breeds of turkeys, as nearly all authorities agree that they are the direct descendants from the wild turkeys. Our "American Bronze" stands unrivalled, as does also our Narraganset variety. We can lay claim to the handsomest wild ducks (Carolina ducks) that swim in any waters, not even excepting the Mandarin ducks of China; and the Mallard we can *almost* claim. Of domestic ducks we have only the Black Cayugas—a good sized duck that originated on Cayuga lake, N. Y. While we have not as varied an assortment as perhaps some other countries, if we count worth, general utility purposes and beauty, size and condition, America can have no cause to hang her head in shame.

The No-Water Theory.

Messrs. Editors American Farmer:

I do not think it necessary to use more of your valuable space in discussing a matter that all so disposed can try for themselves, still I must express my regret that the facts that were to convince me and prove the practice advocated *no* experiment, have not been forthcoming.

Both of the cases cited were known to me, and lately I made a visit to the Doctor, saw and admired his splendid Brahmas, heard his experience as to the water question, and will admit that if he judged the water on his premises was injurious to his chicks, it was well to withhold it. I did not find him a strenuous advocate for laying it down as a rule for others to follow. He mentioned noticing the efforts made by the chicks to get water, and also that when warm weather came in May he then gave water. As his chicks all seemed to be early hatched ones,

they could endure the deprivation during cooler weather.

As the old saw says, one man's meat is another's poison, water obtained from one source may be of a loosening nature and harmful to chicks in unlimited quantities, and from another perfectly wholesome. There can be no imperative rule given for instruction to poultry raisers as to giving or withholding water. As many cases could be cited, I have no doubt, of chickens thriving well that have had water from the first as of the contrary, I do not think any one whose chicks do well with water accessible would be justified in torturing them by depriving them of it.

In conclusion, I am like the man using the old-fashioned fireplace, who, on being told that a stove would save half the fuel, straightway resolved to obtain two and save the whole; so it seems plausible, if the not giving water for five weeks results in the remarkable growth and thrift mentioned by Mr. Brown, that by withholding it for fifty weeks we might raise a *total abstinence* breed that will never get sick or die.

T. W. HOOPER.

[Note.—Having produced evidence or facts such as Mr. Hooper called for—experience other than our own—we are perfectly willing to close the discussion, giving Mr. Hooper the closing argument and allowing our readers to be judge and jury.—G. O. B.]

The Apiary.

Bee Notes for July.

Pursue the same treatment this month as last. All the hives should be fed after sunset if pasturage fails, as it usually does in this vicinity, after the middle of the month. Give your prompt attention to all swarms supposed to be queenless, by overswarming or otherwise; do not let them dwindle away. Give a frame of eggs and hatching brood from a strong colony, care being taken that the queen is not on the comb, and build them up. A comb given at intervals of five days will make a prosperous colony out of a queenless one if treated in this manner. Destroy all but the most prominent cell at the end of eight days after first giving comb containing eggs.

Use great care in opening the hives this month. Always use smoke, because the bees will be ill-natured during the hot days, and especially so if no honey is being gathered. Remove the surplus honey as fast as completed and store in a dry, warm room. Examine occasionally, and if any appearance of moth treat to fumes of burning brimstone and pack away in a tight box. In removing honey from hives use but little smoke, as the honey will be uncapped by the bees if too much is used. Don't use tobacco under any circumstances. See that you do not remove the queen from the hive in taking off surplus honey, as she is at this season often in the honey boxes, and serious loss would be the result in such a case.

When honey abounds keep the boxes on, and contract the brood chamber by using the division boards if a full crop of honey is expected.

Frames taken from such colonies can be put away for future use in preparing for winter, but must be watched or they will fall a prey to the moth. After the honey season has fully passed they can be returned to the bees.

When buckwheat abounds use the extractor and keep brood nest pretty free from honey, and you will be astonished at the workings of the bees. Should they swarm out return them to the old hive after examining and removing all appearances of queen cells.

During hot days shade the hives with pieces of board or give ventilation to the brood nest, but keep honey boxes tight for wax working. Only strong, full colonies will need ventilation or shading.

Supersede all poor or impotent queens by introducing young prolific ones and new blood into your apiary. Give plenty of work for queen to rear brood, that they may be strong for the fall honey when the season arrives and get in good condition for the winter.

Beware not to get the bees to robbing. In any operations being performed use due care not to drop pieces of comb or liquid sweets about, to in any way give them a taste of forbidden sweets.

Use the entrance blocks on all weak or queenless swarms, and adjust them so that but a bee or two can gain entrance into the hive at once.

Sunny Side Apiary, Baltimore.

L.

Horticulture.

Winter-Killed Fruit.

Messrs. Editors American Farmer:

The past winter was very disastrous to fruits in some portions of Virginia, especially the more tender grafted or budded sorts. Mr. Pollard in his "Monthly Bulletin" says: "A correspondent from King and Queen Co., Va., writes us that in the valley of the Mattaponi the peaches are killed, while on the highlands many are living. In the vicinity of Richmond most of them are killed (winter-killed), while in Bedford county, along the foot of the Blue Ridge, we are informed by a resident of that county, they are generally living. From all we can learn the seedlings are everywhere standing best." In narrow valleys and on the low hills adjacent, peaches were entirely destroyed, and in some instances the adult trees also. We know of one farmer who lost at least one hundred, which have been used for fire-wood—trees of all varieties, including seedlings, fared alike with him. On the same place the apple bloomed most profusely, and gave promise of heavy crop, but just as the young fruit commenced forming, at least three-fourths and in many instances all dropped off. This gives an opportunity to prove the comparative hardiness of some of the various sorts. The Wine Sap, that seldom or never failed heretofore, succumbed to a great extent. The Limbertwig, Rawle's Genet, Golden Dixie, and striped or white June, and a few others in these cold situations, including a number of seedlings, stood the winter well and will bear very fair crops.

Now it is very evident that farmers who are compelled to plant in these unfavorable situations should select only those kinds that are known to be hardy, and the sorts we have named we class as *extra hardy*, and our list might include several others, which, altogether, would afford sufficient variety for ordinary uses.

The temperature of hills, say forty feet in height, and of the narrow valleys between is generally fatal to tender fruit; they cannot be less in some localities than ten or twelve degrees below the average of broad table lands or hills of considerable altitude in the same section. As a proof of this, in the writer's section, the foothills and elevations of the Southwest Mountains have orchards loaded with fruit, especially apples, and higher up on the mountain sides and top the peach and cherry luxuriate in all their luscious perfection. The seasons may vary or the winters may be ever so hard, there is no failure there of these crops.

Would it not be to the interest of those having *Arctic situations* to plant the hardy larger fruits for family use only, and go in for grapes and strawberries? These crops, in our section of Virginia, are almost entirely beyond the power of frost and freezing; they bloom late and both are sure crops, and do not often fail like our cereals and tender fruits. The grape, especially, is bound to be remunerative with moderate care and attention, and ours is the grape region. It also has a very wide range, and suitable sorts can be cultivated with abundant success in many portions of our country. J. FITZ.

Kenwick, Albemarle Co., Va.

Norfolk (Va.) Horticultural Exhibition.

We have received a copy of the report of the annual May exhibition of the Horticultural and Pomological Society, which evidences that a most creditable display of plants, shrubs, fruits and flowers was had, and what is particularly worthy of note is that of the twenty-four exhibitors on this occasion, just one-half of them were ladies, viz.: Mrs. E. Vance, Mrs. J. S. Taggart, Mrs. Tazewall, Mrs. Jas. Stokes, Mrs. G. E. Bowden, Mrs. W. H. Haskins, Mrs. G. W. Sheffield, Mrs. Wm. Faltz, Mrs. V. D. Groner, Mrs. W. D. Maupin, Mrs. J. L. Babcock, Mrs. W. F. Irwin, all of Norfolk, and Miss Sallie Vicar, of Brambleton. Twenty-two varieties of strawberries were on exhibition.

The President of the Society, Mr. G. F. B. Leighton, on the first evening of the exhibition, introduced Judge T. S. Garnett, who had been selected to deliver the opening address, and who announced himself as present in obedience to orders.

The Judge began his address by declaring it a pleasant duty he was called on to perform, in welcoming, in the name of the Society, its patrons and friends to the beautifully decorated hall in which they had assembled, and in behalf

of the President and officers of the Society, and of its several committees, he thanked them for the kindly interest they had taken in their labors, and for the appreciation of this good work, so well attested by the large attendance on the occasion, and added: "This annual exhibition of the amateur horticultural products of Norfolk and Portsmouth and their vicinity has become an event in the dull round of our lives to which we now look with pleasurable expectancy. To you, Mr. President, I would fain be, if I could, the bearer of the countless expressions of pleasure and praise uttered by our delighted visitors. To you, sir, I may be permitted to present here the gratifying assurance that the success of this Society and the pleasure which this exhibition affords us are largely due to your untiring and well-directed efforts. Surely, if the title 'benefactor of the race' is conferred upon the man who simply doubles his hay crop, what shall we say of him who has made a whole horticultural society grow where none 'grew before'?"

The Judge then alluded to the great progress which had been made in the taste for horticultural pursuits. According to the editor of Lindley's *Horticola*, there were but twelve horticultural societies in the United States in 1841, and "in 1867, when this Society was added to the list, there were only five hundred others, and as we do everything in this growing country by a sort of arithmetical progression, there cannot now be less than two thousand such societies in full operation, extending their beneficent influences throughout the length and breadth of the land and devoting their whole resources to the noble achievement of the proper results of horticulture, the highest development of agriculture."

We wish we could spare the space necessary to give entire this beautiful address of Judge Garnett. We cannot resist the inclination, however, to give a few brief remarks from it. Alluding to the elegant display before them, mostly the production of amateurs, he said: The object and scope of this Society is not limited to the utilitarian scheme of improving agriculture, and the practical purpose of growing fruits for profit.

It embraces also the most praiseworthy effort in a direction which calls for the exercise of aesthetic tastes and ministers to the enjoyment of the cultivated and appreciative mind.

These rich fruits and fair flowers here displayed to-day are the best testimonials of the taste and skill of the members and friends of the Society, speaking in unmistakable tones the praises of their work and labor of love.

To venture into this attractive theme, without the power to instruct, much less to please, would require a degree of bold assurance to which I cannot lay claim.

But the value of a garden can best be described in the words of a pleasant writer, who says:

"I know you will meet me with that inevitable question, 'Does a garden pay?'"

"I might answer indignantly, does it pay to kiss your wife? or to dandle your baby? Is the gain in health, strength and happiness which this Eden form of recreation secures to be gauged by the dollar symbol? Can the flavor of your

own crisp lettuce or strawberries and cream be bought? Is the perfume of the flowers that your own hands have planted to be had in the market?"

I don't believe that Eden was laid out on the principle of a "truck garden," every inch being planted in a profitable crop; nor do I think that Adam and Eve bustled out every morning with the expression seen on so many American faces, "time is money." The question in regard to a garden seems to me to be, "shall we enjoy a little bit of Paradise this side of Jordan?"

True, the first pomological essay of which we have any authentic record was apparently a disastrous failure, and though primeval woman suffered the penalty of her premature assertion of her rights, yet after all the knowledge of good and evil fruit at least may in the eyes of the inquiring horticulturist be something gained.

Maryland Horticultural Society.

The June show, held on the 1st, was a very beautiful one, all the tables being well filled with good specimens, cut flowers being shown in profusion. The attendance was very good. The following awards were made:

Best twelve store and greenhouse plants, \$4, E. Hoen. Best single specimen greenhouse plant in bloom, certificate of merit, James Pentland. Best six ornamental foliage plants, \$5; second best six variegated foliage plants, \$2; best single specimen do., certificate; best six palms, \$3; second best eight ferns, \$2; best table design, \$5; second best hand bouquet, \$1—Robert J. Halliday. Best six variegated foliage plants, \$3; best six Marantas, \$3; second best six palms, \$2; best eight ferns, \$3; best six Lycopods, \$2—R. W. L. Rasin. Best six Pelargoniums, \$3; best twelve Hybrid Perpetual Roses (cut blooms), \$3—A. Scott. Best display of Orchids, \$5; best twelve Gloxinias, \$2; best six Rhododendrons, \$2; second best six Lycopods, \$1—William H. Perot. Best collection cut Roses, \$5; best twelve Teas and Noisettes, \$3; best hand bouquet, \$2—John Cook. Best collection cut flowers, \$4; second best collection cut Roses, \$3—August Hoen. Second best twelve Teas, \$2; second best twelve Hybrid Perpetuals, \$2—Robert Patterson. Best display of Pæonias, \$2, Wm. D. Brackenridge. Best parlor bouquet, \$2, Miss Allison Patterson. Best design of indigenous grasses and flowers, \$3, Miss Lizzie Patterson. Best and largest collection of strawberries, \$3; best six kinds do., \$2—Wm. Corse & Sons.

Pleasure Grounds and Greenhouse.— July, 1881.

By W. D. BRACKENRIDGE, Florist and Nurseryman,
Govanstown, Baltimore Co., Md.

Pleasure Grounds.

People have now had ample time to discover the amount of damage to trees, flowering shrubs and other plants by the severe cold of last winter.

Our own observations on this head enables us to relate the following. And on the foreground of our remarks it may appear rather strange to state that in some localities large, healthy, well-established trees of both Scarlet and Sugar Maples have had their tops or leading branches killed outright, while the lower ones remain uninjured; and what may in a measure puzzle the arboriculturist is the fact that trees growing side by side with the injured ones have escaped entirely. Nor are such destructive selections confined to deciduous trees only, for we have frequently had to lament deaths in our nursery rows of evergreens from Oregon and California among them *Libocedrus decurrens*, *Thuja gigantea*, and *Cupressus Lawsoniana*, where one, two or three would be killed, sometimes only a solitary tree, while those whose branches touched such remained robust and healthy. We know of no law or rule in vegetable physiology or tree culture that satisfactorily explains why such indiscriminate selections are made—"one taken and the other left."

Among other deciduous trees that have suffered may be noted the *Magnolia macrophylla*, which in some places has lost a number of its branches; we have seen no trees of it entirely lost.

Strange as it may appear, all the Japanese Maples are in a healthy condition, and appear to be as hardy, and perhaps more so than some of our native species. From Japan we have a handsome tree, about twenty-five feet high, of *Hovenia dulcis*, now covered with a profusion of greenish-white fragrant flowers, while the peduncles become enlarged and succulent. It is much esteemed by the Japanese as a fruit, the flavor of which is said to resemble that of a pear.

Every one who owned them had to regret the almost total absence of flowers on *Jasmines*, *Forsythias*, *Spiræas* and *Deutzias* during the last spring and summer. Our rows of white *Spiræas*, when in bloom in former years, used to remind us of a snow-bank. The present season we had only here and there a few tufts of flowers, born on twigs that had been bent down and protected by the snow.

On the two varieties of double-flowering *Deutzias* very few flowers were produced, and these, like the *Spiræas*, near the ground, the upper two-thirds of the plant having been killed, thus making necessary a good deal of cutting back, which latter act will give rise to nice bushy plants.

To give an illustration of the exhaustive influence on recently transplanted evergreens during very cold weather, from the continued evaporation of the sap going on: In the early part of May of last year we transplanted about one hundred English Yews, three to five feet high, made up of three kinds. These were cut back to about three or four feet, after which all became well established, and made growths six to ten inches long during the summer, and looked as well in the fall as those that had stood in their places for years; but the past spring revealed the fact that the tops of about eight out of every ten plants had been killed to the ground, while the roots, on examination, were found in a healthy condition. And we would here remark that there was a larger percentage alive

among the erect-growing variety than either the normal form or among the golden sort. Now on the other hand, old-established plants of the same kinds, that had not been moved for over four years, were only partially browned on the sunny side, which tinge has long since disappeared. We would add to the foregoing that no covering of the tops or mulching of the roots was had recourse to.

Last winter afforded us a good opportunity to judge of the hardness of the English Holly and its varieties, of which we have about ten. Of these, about two hundred plants, from two to three feet high, occupy a bed twelve feet broad, located on the northwest side of an Arbor-vitæ hedge. Here they have stood, without any protection overhead, for three years, without having a single inch of wood or leaf injured. They have no shelter from the northwest winds, and the hedge is high enough to shade about one-third of the bed. The soil in which they grow is a rich loam, but well drained.

No shrub has so far been introduced into the United States to compare with the Japanese Snow-ball for beauty of foliage and profusion of snow-white blooms. It grows freely and is perfectly hardy. It forces well in winter for cut-flowers.

The principal work to be attended to will be that of keeping the weeds in subjection on the flower-beds and walks, and this should be done when the ground is dry, or soon after a rain, as weeds are then easily pulled. Roll the walks well after being hoed and raked. See also that the figures formed by various flowers filling the beds are kept distinct, as pinching back in time will prevent one kind from overgrowing or running into another. Beds in which Hyacinths and Tulips have been grown should be filled with Portulacas, Phlox Drummondii or Petunias; the latter as fall bloomers are admirable. Balsams grow quick and bloom soon if encouraged by generous treatment. Have the grass kept as trim as you would a well-dressed head of hair. Early in the month is a good time to propagate hardy shrubs by layering; and to set about this work properly, dig and break up the ground fine in which you are going to lay, and have at hand a compost of woods earth and sand to place under the layers; then choose a firm shoot of the present year's growth, and with a sharp knife make an incision on the upper side, from one to two inches long, in the direction of the point of the shoot (which is called a tongue); then by a gentle twist turn this tongue to one side, bending it into the ground two or more inches, according to the size of the shoot, making use of a hooked peg to hold it down. Some people multiply Roses in this way. A thin mulching of short grass or moss will keep the ground moist, as thereby roots will be emitted freer.

The Greenhouse.

The collection of Chrysanthemums intended for fall blooming in the house should be kept growing freely, by shifting them into larger pots; give a watering with liquid manure at least once every week; keep pinching back the shoots, so as to secure stocky plants, and continue this pinching until about the middle of

August; keep the pots plunged up to the brim in a bed of ashes, and see that the situation is an open, airy one.

It has become fashionable—and we approve of the fashion—to grow Palms, Cycads and Agaves, not forgetting Orange, Lemon and Oleander trees, to set out in conspicuous places as adornments of the lawn, for which purpose, if well cared for, they are admirably adapted, with this reservation, that they are distributed about with judgment. To mingle with these solitary plants a few handsome vases filled with graceful growing plants, adds interest to variety. One of the most graceful plants for a vase of this kind is the Mexican *Russelia juncea*. But we must keep to strict greenhouse work, and turn to it by saying that if Fuchsias have been started into growth in spring, they will now be in full flower, and to keep them in this condition during the summer they will require a cool, shady situation, out of the drip of trees, but to be syringed daily in dry weather.

Carnations that have been planted in the open ground should have the flower stems, as they are sent up, pinched back as soon as they make their appearance. This will insure you stocky plants by fall, capable of producing a profusion of flowers for winter cutting. Other articles used for the same purpose, as Stevias and Eupatorinas, should be treated in the same way.

Withhold water from Calla Lilies as soon as the leaves begin to assume a yellowish tint; then lay the pots on their sides in a cool place until the potting season arrives. The same treatment should be extended to *Lilium lancifolium* and *Lilium auratum* bulbs, but we do not advise pots containing *Amarylhis* bulbs to be allowed to become perfectly dry—we mean such whose bulbs have thick succulent rootlets; when these are suffered to dry up the bulb is weakened more or less, as these rootlets, if preserved, will, when the season of growth arrives—like certain Orchids—send forth lateral rootlets.

Gesnerias and Gloxinias, as well as Achimenes, like a humid atmosphere, but they do not like to be heavily syringed overhead. Neither do the yellow and white powdered *Gymnogrammas* like it; in fact, its constant application overhead for a few months will kill the latter outright.

Ferns, like Orchids, require their habitats and wants to be studied, as where one will luxuriate another will linger and die, and when this takes place few gardeners will stop to get at the cause.

Amateur Cultivation of Pot-Plants.

At the May meeting of the District of Columbia Horticultural Society, Thos. W. Fowler gave an interesting address on the topic which heads this article, and in which he gave the audience the benefit of his own experience. He said: "I am under the necessity of confining myself to my own experience in their treatment—my failures and successes. Some fifteen years or so ago it was my good fortune to become acquainted with a gentleman—a professional florist—whose conversation and readiness to give information first awakened in me an interest in the growth of plants, that has grown stronger and stronger each succeeding year to the present

time, affording many hours of pleasure in their study, and causing the spirit to offer silently the prayer of thanksgiving to the Creator of all things for these beautiful emblems of His love to cheer and gladden the heart and make pleasant the journey of life. The man or woman who really delights in the cultivation of plants, either in the garden or conservatory, has no disposition to spend time in gossip."

After some felicitous remarks upon the delights attendant upon the cultivation of plants and the beneficial effects upon the moral as well as the physical nature, Mr. Fowler proceeded as follows:

"The question then that presents itself to us is, How can we successfully cultivate flowers?"

"The First Step

is in the preparation of soil suitable to their growth; neglect in this particular will surely be followed by failure. I would advise my amateur friends to begin at once this very necessary preparation by procuring a quantity of sod from an old pasture, which may be placed in some out-of-the-way corner of the garden until pretty thoroughly rotted, so that it can be chopped into nice fibrous soil. Next get a half load of sharp sand and a sufficient supply of well-rotted manure. Soil suitable to the growth of nearly all varieties of plants may be prepared by the admixture of these ingredients in quantities more or less of each as experience may demonstrate. If peat can be procured and added so much the better. Soil in which seeds are to be sown should be composed of a greater part of sand; peat and sand with a little loam will make a good soil for this purpose.

"In Sowing of Seeds

care should be taken not to plant too deep, just covering the seed about twice their own depth. Seeds of Begonias, Gloxinias, &c., which are very small, should be sown on the top of the soil after it has been thoroughly watered. After sowing the seed press the soil gently with the bottom of a small flower-pot, then place a glass over the seed-pot, which will assist in retaining the moisture necessary for their germination. In all subsequent waterings care must be taken not to disturb the seed, but the watering should be done very gently.

"The Cause of Failure

of many in growing pot-plants may be attributed in a measure to the manner of potting. We sometimes hear the inquiry: 'How is it your plants look so healthy and bloom so well while everything I plant dies?' The reply could very properly be made: 'You take your soil from any convenient spot, from your back lot, without regard to its fitness for the purpose intended. Mine is carefully prepared. You place your plants in very large pots. Mine are in comparatively small ones. You have carefully filled the pot full of soil and have it nicely sloped upward from the edge of the pot to the stock of the plant, so that it is almost impossible to have water reach its roots. Mine is filled to within an inch or two of the top of the pot, so that an abundance of water may be placed therein and percolate the soil and so reach every rootlet of the

plant.' Keep the foliage of your plants clean, thereby insuring health and vigor. The amateur who has room for the cultivation of but a small number is interested in those that will yield the most bloom, especially during the winter months. I have named below some that in my opinion will give general satisfaction; they are easy of growth and profuse bloomers. First,

"The Calla Lily.

This old plant is too well known to require any extended notice. If the bulbs or tubers of this lily be potted in good soil about the middle of September, and given a liberal supply of water at all times, it will quickly start into growth and give out its fine, large flowers from December to May. Manure water is very beneficial to this plant. After flowering, gradually withhold water, and when the foliage shows signs of decay, lay the pots on their sides and give no further care until time for repotting, when the tubers should be cleansed of the old soil and repotted into new. When grown in the sitting room the leaves should have an occasional sponging to prevent the accumulation of dust.

"The Cyclamen

is one of the finest winter blooming plants in cultivation, and should be a favorite with all. They are easily grown from seed. Seed planted in February and March will bloom the next winter, although they will not be fully matured until the second year. They appear to be in their best condition when two years old. After the seed has germinated, and the little bulbs are the size of a small green pea, transplant into other pots or boxes, leaving space for growth. Transplant again in the fall into single pots; a five-inch pot is large enough for a two or three year old plant. After they are done blooming, let the bulbs gradually dry off and lie dormant during the summer months, giving no further attention than an occasional light sprinkle of water to preserve the bulbs from dry rot. Some persons recommend that they be kept in growth all the summer. I prefer giving them rest; indeed, my experience is that they will not grow during the summer months, except seedlings less than one year old. They require good loamy soil, with but a small quantity of sand and manure. They give abundance of bloom from December to the latter part of April.

"The Primula, or Chinese Primrose,

is another fine winter blooming plant of easy growth, either from cuttings or from seed. Seed sown in June and July will make good blooming plants by December. Care should be taken not to over-water the plants, and to avoid watering the foliage if possible. Soil should be freely mixed with peat and sand. The Primula and Cyclamen both delight in moderate shade and cool temperature.

"Geraniums,

if planted in good soil, will give general satisfaction. Both the single and double varieties as now grown are very beautiful.

"In the Cactus Family

there are many curious forms and handsome flowers. They are also of easy culture. They

should be planted in soil composed largely of sand, old lime rubbish and loam. Give but little water, except when making new growth. I do not water my cactus, except *Epiphyllum Truncatum*, which blooms in winter, from November to April. As the spring advances I give a moderate supply of water, and am rewarded by their rich and many colored flowers. Many friends complain that their cactus will make nice growth but do not flower. The reason I am sure is they have been too freely watered.

"In Winter Blooming Begonias

there are many varieties, but among all that I have grown none presents a finer show than the tuberous *Begonia Fiebleri*, which is covered during the winter with its large blooms of dazzling scarlet. It has been advertised as a summer blooming variety, but I think that is a mistake. Those I have grown lie dormant during the summer, and start into growth in the fall. They bloom in winter and ripen their seed in February and March. I have at this time a lot of seedlings from seed gathered in March last. The list of winter blooming plants could be still further extended, including *Hyacinths*, *Polyanthus* and other bulbs.

"The Orchids.

"I know that I am treading upon dangerous ground in speaking of another class of plants in the cultivation of which I am yet in my alphabet. I refer to the Orchid family, many of them of the most beautiful colors, others of the most singular and grotesque forms. Until very recently it was supposed that their cultivation could only be entrusted to the most experienced professional florists; that they required a very high temperature for successful cultivation. It has been proven of late years that this was an erroneous idea, at least so far as many varieties are concerned. During the past winter, with the temperature several times below 40°, and seldom as high as 60°, I have grown and bloomed several Orchids, and have now good plants of *Cattleya Mossii* in bloom, that less than one year ago were growing in their native woods, but were wintered in the temperature mentioned above. I have grown during the winter the following Orchids in this cool temperature, viz.: *Acroperia* (bloomed), *Angulca* (in bud), *Brassavolas*, *Cattleyas* (in bloom), *Cypripedium Insigne* (bloomed), *Dendrobiums*, *Epidendrums*, *Laelias* (bloomed), *Lycastes*, *Odontoglossums*, *Oncidiums*, *Stanhopias* and *Vandas*. I have but one or two plants of those named, but as they have done so well, I hope to add to the list the coming months.

"It cannot be expected that all the plants named can be grown in the rooms of a dwelling with the same success as those grown under glass, therefore let the amateur erect for himself, if possible,

"A Small Conservatory.

not such as we find attached to some dwellings, where all the light obtained comes from the sides, but build one in your garden. There are but very few house lots in our city where some such places could not be built. It need not be expensive. The first one erected by myself was made by two old window-sash and just large

enough to accommodate about one dozen plants. My present one is 10 feet wide by 40 feet in length, and capable of holding nearly 1,000 pots, and in this I can grow my plants with very nearly the same success as my professional brother. Try it, and my word for it, you will never regret the loss of time or money expended."

Hampton.

Having recently had an opportunity of inspecting the horticultural establishment at Hampton, a description of this place, one of the oldest and in many respects the finest of Maryland country-seats, may not be uninteresting to our readers. Hampton, as is generally known, is the ancient seat of the Ridgely family. The estate lies mainly in the beautiful Dulaney's Valley, north of Towson town. The first view of the stately old mansion from the Dulaney's Valley turn-pike, with its pinnacles and symmetrical dome showing in dazzling white against the dark background of hills, is singularly beautiful. To the north, down the valley, across which a line of blue haze shows where the Gunpowder river forces its way through the hills into the wild gorge of Loch Raven, lie the farms of the estate, covering thousands of fertile acres. The approach to the mansion opens through a lofty iron gateway flanked with massive pillars of white marble, and passes, by a well-constructed drive, through a handsome bit of park to the north front of the dwelling. Nearing the mansion, the chief object of horticultural interest is the old orangery, which is now nearing its centennial, and is perhaps the oldest greenhouse structure in America. It is a long narrow building, having glass only on the south side and east end. The roof is of shingles (now covered with tin), and it is lathed and plastered inside, so that it is totally unlike greenhouses of modern construction.

This house still serves as the winter quarters of probably the oldest collection of the Citrus tribe in this country. The trees are in immense tubs, and are used in summer for the decoration of the lawns and terraces. The crop of lemons and oranges is fine, and the trees are in fair health, but they have grown to such a size that the old building is far too small for their accommodation, and though they receive all the care and skillful treatment possible under the circumstances from Mr. Massey and his efficient corps of assistants, unless they soon receive better winter quarters their rapid deterioration is certain.

On the beautiful lawn, stretching from the

south front of the dwelling to the edge of a grand terrace which overlooks the flower garden, are some fine specimen trees. The blood-leaved beech planted by the veteran John Feast fifty years ago now sweeps the ground in a circle fifty feet in diameter, while its rounded top is fully as many feet in air. A fine cedar of Lebanon, fifty feet high, stands in the centre of the lawn, and was entirely unharmed by the late severe winter, while flanking the gravel walk along the top of the terrace stands a row of our native cedars, which by their gigantic size attract the attention of every one and give the whole place an aspect of stately old age. Passing down the lofty terrace and turning to the west, we come to plant-houses proper. These are six in number, and comprise greenhouse, stove, fernery, grapery, rose-house, and a new and admirably planned house used for forcing flowers for winter cutting. On account of the immense demand upon him for cut flowers, and the enormous quantity of bedding plants used in the gardens, Mr. Massey has no room to grow specimen plants of much size, and therefore wisely does not attempt much in that line, but handsome specimens of rare plants of moderate size are by no means scarce. In the rose-house, seventy-five feet long, the entire space is so occupied by three or four gigantic plants of Marshal Niel that the dwarf roses have but little chance. In the fernery fine specimens of *Cibotium glaucum*, and other true ferns, and a magnificent specimen of *Adiantum Farleyense*, over four feet in diameter, find place. In the stove a small commencement is being made of a collection of orchids, including a *Dendrobium Nobile*, in a basket, which is over four feet in diameter and had nearly seventy flower stems.

The amount of bedding plants used in the gardens here is amazing. Mr. Massey informs us that this summer he has used 10,000 *Coleus*, 4,000 *Geraniums*, 2,000 *Alternantheras*, with uncounted numbers of *Verbenas*, *Salvias*, *Lantanas* and *Annuals*. He estimates that the portion of the garden annually filled with bedding stuff requires over 20,000 plants. The extreme lower flat in the garden is occupied as a rose garden, and here have been planted in the last two seasons over 4,000 roses. To the east of the flower garden, shut out from view by a well-kept hedge of *Arbor-vitæ*, lies the kitchen garden. This is of ample area, but it is cut up with wide grass walks, and the squares are encumbered with trees, so that the furnishing a supply of vegetables from it must tax the gardener's skill. Mr. M. informs us he furnishes vegetables for an

average of forty consumers from this garden. To give some idea of the amount of work on the garden force here, Mr. Massey tells us that he has twenty-five acres of short grass, about twenty more of rough park mowing, five acres of vegetable garden, 275 flower beds mostly cut out in sod, two and a half miles of gravel walks and drives, with over seven miles of grass edging on walks, drives and flower borders, and that he never keeps more than seven assistants in summer and generally but three in winter.

Market Gardening Around New York.

Mr. Peter Henderson furnishes us with a copy of his paper bearing the above title, read before the annual meeting of the American Association of Nurserymen, Florists, and Seedsmen, held at Dayton, O., June 16th, 1881, and which will be perused with interest by our readers:

Probably nowhere, in this or any other country, is the business of market gardening better done than in the vicinity of New York city. The reason for this is probably to be found in the fact, that New York, being the great depot for all the nationalities of Europe, gets from them the various methods there practiced; in addition to this, and what may have even more to do with it, our higher priced labor forces us to adopt plans entirely unthought of there. Certain it is, that, as far as the practical work in use for cultivation is concerned, our methods, in nearly all operations, are quicker done and equally well done here as there.

In the immediate suburbs of New York, where the lands are rapidly being taken for building sites, many of the market gardeners pay as high as \$100 rent per acre, annually, and that too, in most cases, without a lease. All such lands, of course, are cultivated to their fullest capacity, and even at present prices (which are hardly yet up to those of ante-war times), bring an average gross income of about \$1,000 per acre. A great advantage is found in having the lands for growing vegetables as near to the city as possible. The saving in hauling of manure is one important item; but another, and one far more important, is that, if the grower is near enough to the city to make two or three trips a day, in such a fluctuating market as New York, it is greatly to his advantage. I have frequently seen that nearly double value could be obtained for products within twenty-four hours. I remember, on one occasion, when engaged in business in Jersey City, where we were within half an hour's time of the great wholesale Washington Market of New York, one Saturday, that each of our four wagons made three trips, taking in twelve loads of cabbages, which averaged \$50 per load; while on the Monday following, the same loads only brought us \$30 per load. Had we been ten or twelve miles distant from the market, as the greater number of those engaged in the business are, the advantage of the high rates ruling that day could not have been taken advantage of. I am inclined to believe that,

whatever kind of horticultural product is grown, whether fruit, flowers or vegetables, he that is nearest the market, other things being equal, has a decided advantage; so much so that, in most cases, a man had better pay \$50 or even \$100 per acre rent, if within one or two miles of the market of a large city, than to go ^{and} ten or twelve miles away for nothing.

I have little to relate new in methods of culture, in the open ground, in market gardening. Nearly the same processes are now practiced as when I first wrote my work on this subject in 1866; but since that time we have made many important improvements in culture under glass, particularly in the methods in use in starting plants of cabbage, cauliflower and lettuce; the old plan of sowing the seeds for these plants in the open air in September and picking them off in October, and keeping them in cold frames, is gradually giving way to sowing in greenhouses or hotbeds in February and picking out in March, which gives a far healthier and nearly as strong a plant, by the first week in April, as those that have been wintered over. The past season we raised nearly half a million of plants in this manner, which we sold at \$5 per 1,000, a price as profitable to us as the plants were satisfactory to the buyers. We sowed the seed the first week in February, in one of our greenhouse benches, so thick that they stood twenty plants to the square inch; these we began to thin out, to prick in hot-beds, just as the first rough leaf appeared, placing 1,000 plants in a 3x6 sash. The handling of that quantity was a big job, but I doubt if one plant in a thousand failed, owing, I think, to a plan we used in preparing the bed on the green-house bench for the seeds—a plan that I think well worthy of imitation in preparing a bed for seeds, that have to be transplanted, of any kind, whether outside or under glass. We used only two inches in depth of "soil" for our seed bed, which was made up as follows: The first layer, of about an inch, we used a good friable loam, run through a half-inch sieve. This was patted down with a spade and made perfectly level and moderately firm. On this was spread about one-fourth of an inch of sphagnum (moss from the swamps), which had been dried and run through a sieve nearly as fine as mosquito wire, so that it was of the condition of fine saw-dust. On the top of the moss the ordinary soil was again strewn to a depth of about three-fourths of an inch. This being leveled, the seed was sown very thickly, and then pressed into the soil with a smooth board. On this the fine moss was again sifted, thick enough to cover the seed only. The bed was then freely watered with a fine rose, and in a week every seed, that had life in it, was a plant. Now this seems a long story to tell, about what we must consider a very simple operation, but it is necessary to give these details to a thorough understanding of the advantages of the method. When the seed of most plants germinate, where they are thickly sown, the stems strike down into the soil, the roots forming a tap-root with few fibres, unless arrested by something. Here comes the value of our one-fourth of an inch of sifted moss, placed three-quarters of an inch from the top. As soon as the rootlets touch the moss they ramify in all directions, so that when a bunch of

seedlings is lifted up and pulled apart, there is a mass of rootlets, to which the moss less or more adheres, attached to each. To the practical gardener, the advantage of this is obvious; the tiny seedling has at once a mass of rootlets ready to work, which strike into the soil at once. The advantage of the moss covering of the seed is not so apparent in the matter of a free germinating seed such as cabbage, as in many others, but in many families of plants it is of the greatest value. For example, I, last November, took two lots of 10,000 seeds of *Centaurea Candida* (one of the Dusty Miller plants so much used for ribbon lines), both were sown on the same day, and exactly in the same manner, in boxes of two inches deep of soil; but the one lot was covered with the sifted moss, and the other with fine soil. From the moss-covered lot we got over 9,000 fine plants, while from that covered by soil only about 3,000. The same results were shown in a large lot of seeds of the now famous climbing plant, *Ampelopsis Veitchii*, and in the finer varieties of *Clematis*.

The reason is plain: The thin layer of sifted moss never breaks or hardens, holding just the right degree of moisture, and has less tendency to generate damp or fungus than any substance we know of. In this connection I may state that the use of wintered over lettuce plants, for forcing in greenhouses or hothouses, has here to a great extent been abandoned, and that the plants used for that purpose are such as have been sown five or six weeks only previous to planting in the manner described for cabbage plants, sowings being made for succession as required. These young plants are found to be far less liable to the lettuce disease known as "rust" or "blight," which has created so much havoc in forcing this vegetable in all quarters of the country. I have been written to by hundreds in relation to a remedy for this disease, and know of none, except the use of young plants raised as above recommended, using wherever practicable fresh soil each season. One of my neighbors who uses nearly 3,000 sashes in the forcing of lettuce has adopted this plan for the past two years and has had no lettuce disease.

As I have before said, although there is but little in general culture to tell, almost every year brings out some improvement in varieties. Within the past dozen years, many important advances have been made in earliness and in quality of vegetables. Among beets we have the Egyptian, which matures at least five days before any other variety, except the Old Bassano, which was too light in color to suit; in cabbages, the Early Summer; and in cauliflower, the Snowball; in celery, the Golden Dwarf; and the next season is likely to develop a great improvement in the New White Walnut celery, a stout, solid kind, having a rich walnut-like flavor, and graceful, feather-like foliage.

In lettuce, the Black-seeded Simpson and the White Summer Cabbage lettuce now lead all the out-door varieties; in muskmelons, the Hackensack, of which many thousands of acres are grown for New York market, is almost exclusively planted. In peas, a great improvement is developed in the dwarf variety known as American Wonder, though for general early crop the

Improved Dan O'Rourke is best. Potatoes vary so much in different localities that it is difficult to say which of the new sorts are most valued; we find, however, that in our general trade more of Beauty of Hebron is planted than any other of the new sorts. In radishes, the New Round Dark Red is now the main favorite, while next in order comes the "White Tipped Turnip." In spinach the Savoy and the New Thick-leaved are the best for general crop; though we find that the Savoy should not be sown in spring, as it runs too quickly to seed. Though every year brings out new claimants for favor in tomatoes, it is my conviction that we have not advanced one day in earliness (unless in such varieties as Key's Prolific and Little Gem, which are of poor quality) in twenty-five years, although we have now many varieties, somewhat improved in quality. The varieties now most popular with New York market gardeners are Acme and Paragon, though, from the usual advertising given to Trophy, the general cultivation of that is greater than any other; but, as it is usually found now, it is far inferior to many others, besides being one of the latest varieties.

Quite a number of our market gardeners are now getting to grow strawberries in conjunction with their vegetable crops, by following the pot-layering system, by which a crop is obtained in less than a year from the time of planting. We have ourselves grown for the past six or seven years upwards of an acre of strawberries in this manner, alternating them with the vegetables, grown in our "trial grounds." As the process may be new to some I will briefly detail it:

Just as soon as the fruit is gathered the beds are well forked up and the runners begin to grow rapidly, so that, in the vicinity of New York, we can always obtain strong pot-layers by 10th to 15th of July. These, if then planted out, never fail (if properly cultivated and the runners kept pinched off) to give a full crop by June of next year; not only a full crop, but finer fruit than is usually obtained by the other methods. Our manner of performing the operation of layering the runners of strawberries in pots is as follows: The pots, which should not exceed 24 inches in diameter, are filled with the soil in which the strawberries are growing, and "plunged" or sunk to the level of the surface; the strawberry layer is then laid on the pot, being held in its place with a small stone; the stone not only serves to keep the plant in its place so that its roots will strike into the soil of the pot, but it also serves to mark where the pot is; for, being sunk to the level of the surface, rains wash the soil around the pots so that they could not well be seen unless marked by the stone. Any good workman after a little experience will lay 2,000 per day. In ten or twelve days after the strawberry layers have been put down the pots will be filled with roots; they are then cut from the parent plant, taken up and placed close together, and shaded and watered for a few days before being planted out. If so treated not one plant in a thousand need fail. We grow only an acre or so each year for the purpose of testing varieties; but I am so convinced of the value of the plan that if I grew largely for market I would prefer it to any other.

It will be understood that by this method the plants only occupy the ground about ten or eleven months from the time the plants are set out in July or August until the fruit is gathered in June. As I have before said, we alternate the strawberry crop with vegetables. Our samples of cabbage, cauliflower, radishes, lettuce, etc., in our trial grounds, occupy the same space, so that when the ground is cleared of these in June or July the strawberry layers are planted in their place, while a crop of celery takes the place of the strawberry crop that had fruited, so that the ground is never allowed to lay idle.

The question of fertilizers for the use of the market garden is now becoming a very serious one for the market gardeners, in such cities as New York, where the manure from the stables does not increase in the ratio of the increase of the lands cultivated, as perhaps half of all the products grown are shipped to adjacent towns and cities. Still there are few market gardeners who do not use stable manure, which costs when fit to go on the land from \$2 to \$3 per ton. This is put on in spring at the rate of from fifty to seventy-five tons per acre, to which is often supplemented half a ton of Peruvian guano or bone dust, which is sown on and harrowed into the land after the stable manure has been plowed in. A great variety of fertilizers are used besides Peruvian guano and bone dust, such as fish guano, dry blood fertilizer, blood and bone fertilizer, together with the various brands of phosphates; but the majority of cultivators prefer pure bone meal or Peruvian guano to all others. I saw a list the other day wherein was enumerated no less than sixteen separate kinds of special fertilizers for thirty different crops, with the chemical elements of each split down to even one-half of one per cent. Now I know nothing whatever about agricultural chemistry, and it may be presumption in me to criticise such a list; yet when I am told that one kind of fertilizer is needed for cabbage, and another kind for turnips; one for sugar cane, and another for corn; one for wheat, and another for grass—plants, if not of the same family, at least of the same natural order—I am forced to the conclusion that science, so-called, is taking the place of common sense, and is in direct opposition to the experience of the practical farmer or gardener in his operations in the soil. In our market gardening and greenhouse operations we cultivate largely nearly every known family of plants, and in my long experience I have yet to see a fruit, flower or vegetable crop that was not benefited, and nearly in the same degree, by a judicious application of pure bone dust; and I would here suggest to the advocates of special fertilizers that in their experiments they try equal weights of pure bone dust to the half of the crops of wheat, potatoes, cabbage or strawberries, being experimented on by the "specials," and note the results. I do not mean to be understood that these so-called special fertilizers do not answer the purpose of the crop to which they are applied; but what I protest against is the hair-splitting distinctions claimed for them, confusing and troublesome to the cultivator, if of no practical value. American commercial florists have for the past quarter of a century utterly discarded the various formulas for prepa-

ration of different soils, for the various families of plants cultivated, so dogmatically insisted upon even yet by most European gardeners, and instead of a dozen different mould heaps, usually one only is used, composed of three parts rotted sods and one of rotted stable manure; yet who will say that our results have not been as good in consequence? I believe the same fate is soon to overtake the "specials" in fertilizers. They may hold their own perhaps for a time among a few amateur cultivators of 7x9 garden patches—men usually glib with the pen and who get in an ecstasy over their success with a dozen tomato or a score of strawberry plants—but few of the hard-fisted gardeners or farmers who live by the soil are likely to become converts. My business as a seedsman brings me in contact with many hundreds of farmers and gardeners each season, but I have known of few who think it necessary to use special fertilizers for special crops.

It would certainly be a misfortune for the orange grower of Florida, the cotton planter of Louisiana, or the wheat grower of Ohio, if he was induced to freight a special manure for his particular crop 1,000 miles, if he had as good a material in bone dust at his door. If our law makers at Washington had given that attention to agriculture that its importance deserves we would long ago have had suitable grounds there to test such questions on a scale large enough and broad enough to determine whether or not the manure suitable for a potato was equally suitable for a cabbage.

I beg to apologize for the time occupied in discussing fertilizers, but the subject is one of the first importance to every cultivator of the soil, be he a farmer, market gardener, nurseryman or florist; and whether right or wrong in my conclusions, if what has been said may cause further investigation to get at the facts I shall be satisfied, whatever these facts reveal.

The Grange.

BALTIMORE COUNTY GRANGE No. 13.—The regular annual meeting was held at the County Fair Grounds at Timonium, on June 9th, a very heavy rain diminishing the usual attendance. The following officers were elected for the ensuing year: M., C. Lyon Rogers; O., Daniel Jenifer; Lec., Wm. B. Sands; St., Richard Vincent, Jr.; Asst. St., Charles W. Semmes; Ch., Andrew J. Rogers; Treas., Geo. H. Merryman; Sec., Charles B. Rogers; G. K., Samuel C. Heidt; Ceres, Mrs. C. Lyon Rogers; Pomona, Miss Angie Emmart; Flora, Mrs. James Pentland; Lady Asst. St., Miss Ella Jones.

Evenings at the Grange.

Old Virginia Ham and April Et Ceteras.

Now that the ice of repression was broken, there was danger of too many airing their opinions, so that the Worthy Master might have to say, as the children do in their plays sometimes, "Don't all speak at once!" But no such result happened. Only the formality and the

formidableness of speech-making was gone, and our pleasant little colloquies were tempting some of our timid members to "say a word." Even shy Sister Marce, who vowed she'd faint if she ever had to "speak in meetin'," was decoyed into taking a part, unconsciously, in one of our funny family talks on the comparative value of the dairy and hennery. Amusingly exhilarated she got, too, by the way, when after a stiff little wrestle of pros and cons her side (the feathered) came off with flapping wings and triumphant crow.

Notwithstanding the temptation of conversational stimulus, however, we stuck closely to our good Grange rule, never to speak except for the purpose of getting or giving information, and so we were not betrayed even into the mere talk for talk's sake.

One excellent little habit we were getting into. It was that of giving the Grange at each meeting the benefit of any information (on subjects of Grange interest, of course), new or old, that we had reason to believe was not generally known, and that would be worth the knowing. As the subject that was to be talked over "at next meeting" was proposed in advance, and as those interested generally read up and thought up in the interim, it was a very rare thing that this way of bringing in and comparing experiences and facts and opinions from all the different budgets did not add materially to our stock of useful information—that best of Grange stock, by the way—as well as give us all a pleasant and profitable evening. The only stipulation was that the member must deliver his information in the shortest, simplest, and most direct manner. Each being allowed only a few minutes as to subjects, we never allowed any that required other than this plain, straight-forward handling by farmers and housekeepers.

Last evening gave an example just in point. Some of us had dined by accident with one of the brothers a few weeks previous. The backward spring allowed a most limited supply of fresh table products this first of May. But the new ham was so surpassingly good, and the few accessories in the way of vegetables so well rendered, that there was really left nothing to be desired to furnish forth a most enjoyable and appetizing dinner. So, at our particular request, this evening the brother's mode of "putting up bacon" was discussed. He told us in a few words that there was nothing very peculiar in his mode that he was aware of. He was only careful about the time of killing and the condition of the hogs, never allowed his porkers to make heavy gross meat, and never killed when there was danger of the meat freezing. He usually took a cool spell in November, and never cared for the hog to weigh more than from 150 to 175 pounds for table use. When neatly cut-out, to the 1,000 weight of pork he put about 1 bushel coarse salt, $\frac{1}{2}$ bushel fine salt, 1 pound of ground pepper, and $\frac{1}{2}$ pound of saltpetre, well mixed and rubbed in. Packed down in tight hogsheads for some six weeks—longer if the weather has been unfavorable to the meat's "taking salt." When taken out he rubbed well with hickory ashes, and smoked with the smoke of hickory chips.

"This," he remarked, "is all that I know about

Putting up Bacon

Curing Bacon

the curing of bacon. As to the cooking, which I was going to say was the better half of the joint concern, I must refer you to my good wife here, who knows more about the philosophy of bacon than I do. Mrs. H. is a creative genius, too, I'd have you to know, and can make something out of nothing as well as any woman you ever saw. She showed you the art in those 'April et ceteras' of hers, as I call those spring *fein's*, and which some of you so kindly admired the other day. Tell about them, wife."

Thus solicited Mrs. H. rose modestly and said that the only secret in the cooking of their bacon was that the joint was always "put on" very early in the morning, never boiled hard, only simmered for hours. Then it was taken from the pot, skinned, and put in a pan and *baked*. This she considered the very greatest improvement on the old plan of simply boiling. It brought out the delicate flavor, and the meat kept sweet and juicy to the last slice, so that there need be no waste, as is usually the case with the unprized "cold bacon bone." As to those April et ceteras that Mr. H. seemed inclined to laugh at, she would certainly take pleasure in introducing the Grange to one of them, her delicious wild *asparagus*, if they had not yet made its acquaintance—the tender young poke, which she had cut carefully, then laid in salt and water for an hour or so, and cooked and dressed as you would asparagus. She considered it quite the rival of this garden favorite, though only an uncultivated far-away cousin, many degrees removed, and she advised the brothers in the early spring when longing for something green, like the poor cattle, to go *poking* about the fence corners!

The *crisp white salad* that was so admired as one of her pet "so forths" was nothing but the beautifully bleached tops of the turnips that had been carefully covered from the weather. She would not encroach longer on their time, but there was another of her "April et ceteras" which she must not fail to give them the receipt for, as it would be found invaluable by any one who tried it. This was the *salad dressing* which all had enjoyed that day. It was made in this way: To a well beaten egg add (after mixing together) 1 tablespoon mustard, 1 teaspoon salt, pepper to taste, $\frac{1}{4}$ cup strong vinegar, 1 cup cream or fresh milk, and as much butter as you please; stir while cooking till smooth and thick; serve cold. This made also an excellent sauce for cut tomatoes, cucumbers, lettuce, and all sorts of salads, and being inexpensive and easy to make, it was always—to use a housekeeper's word—*come-at-able*. VIRGINIA CLARKE.

Work for the Month—July.

The farmer must be wide awake now, and on the alert to avail of every opportunity to make the labor given to the saving of ripened crops effective, that the results of his care and patience may be promptly and economically secured.

The **Wheat Harvest**, though as a rule somewhat later than last year, will be completed in most sections into which the *American*

Farmer goes before this number is read, but if anything is lacking in the way of attention to securing the crop completely, it should be attended to at once. Where it is practicable to do it, the most convenient and economical plan is to thresh without putting into the barn or stacking, waste, delays and labor being thereby saved.

Hay Harvest.—Use all precautions to keep timothy from getting wet by rain, and let the dew get off in the morning before beginning to cut. Rake up at night in windrows, so that it will not blacken by exposure to the night dews. Timothy should not be allowed to get fully ripe before cutting. There is more nutrition in the grass just at the time when about half the blossom has fallen. If the seed perfects itself the stem becomes hard and woody.

Corn.—There has not been much drought so far this season to contend with, but the frequent rains have made the grass and weeds grow vigorously. If the crop is not ready to lay by, the cultivator should be kept at work.

Millet and Hungarian may be put in, care being taken to get the land in good order, and to fertilize well if in poor heart. A bushel of seed or less is sufficient for an acre.

Fodder Corn may still be planted, by preference in drills instead of broadcast, so that the cultivator may be run through them two or three times.

Buckwheat.—This crop may be sown about the middle of the month, and the land ought to have, if deficient, a dressing of manure or superphosphate. Two to three pecks of seed will do for an acre, which should be harrowed in and rolled.

Tobacco.—The planter must now see to it that the young plants are kept clean of grass. The first glut of worms ought to be caught up as fast as they come. We have no doubt that this glut of worms make more or less changes into the horn blowers for the late fall glut. Stir the ground with hoe, and plow around the plants so that the air can penetrate among the roots. The roots of tobacco need the air as well as the leaves. Nitrogen is taken in and absorbed by the roots of the tobacco—it is a necessity to all vegetable products. Tobacco in the barn must now have strict attention. Examine bulks; if warm, or even over high, shake out, dry and pack up at once in prizing order. Spread out the bundles in fan shape, pile up weights, tobacco sticks, logs, &c., so as to preserve it in condition for packing in hogsheads. Preparing tobacco for market is one of the most delicate operations now to be attended to. If the tobacco has been properly manipulated in bulk so as to bring out the aroma, then is there nothing more to do than to pack up according to color. We earnestly advise planters not to line the hogsheads with common tobacco. Tobacco worth only two or three dollars had better be consigned to the manure heap.

Potatoes.—Do not let these suffer from neglect, but keep free from weeds and the ground in light and open condition. Some growers recommend a top-dressing of ashes, salt and plaster, say two bushels of the mixture, in equal proportions, to the acre.

Turnips.—Ruta Bagas may be sown to the 20th, and they will start off better if the seed can be gotten in just before a rain. They should be sown in drills thirty inches apart, and thinned to stand at distances of twelve inches. The fly may be circumvented by dusting over the young plants fine ashes, air-slaked lime or plaster; when they reach the rough leaf they are safe from its attacks. Begin to cultivate early, and repeat the workings as soon as convenient, and keep the earth between the plants open by the use of the hoe.

Flat turnips may be sown from the 25th of this to the same date in next month; they are usually sown broadcast, and harrowed lightly or brushed in. New land is especially suited to the crop, and that of a somewhat sandy complexion. Ashes and superphosphates seem to be specifics for this crop.

Live Stock.—Feed cattle and hogs enough to make them do their best at converting into meat the grass which is abundant this year. On dairy farms surplus pork ought to be pushed rapidly ahead so as to secure the high prices usual in early fall.

The Orchard and Fruit Garden.—July.

Early varieties of apples, pears, peaches, plums, &c., will be marketable this month, and will give opportunity to growers to judge of the comparative merits of different kinds.

Among the first named it is time we were hearing something of the value of the Tetofsky and Fourth of July as market apples in this section. From our own experience with the Tetofsky, we are inclined to doubt its becoming popular in this vicinity as a market fruit; for unless the thinning out of fruit receives proper attention, the apples are too small, and a large percentage of them are knotty and deformed, so much so as to be unfit for use. The Fourth of July promises more satisfactory results; the quality of the apple is better, as also its size and appearance, while the growth of the tree is all that could reasonably be desired.

If the Fanny succeeds elsewhere as it has during 1879 and 1880 with us, the Red Astrachan will be less popular in the future than at present. With early pears, everything considered, we like Osband's Summer as well as any other; Benné Giffard is earlier, but then the trees are such miserable ugly growers that many would dislike it on that account. Dryenne D'Été is also earlier in ripening, but the fruit is too small; while Madeline and Maynard are both very inferior in quality with us. For canning we esteem the Osband second to none that we have tried. This month will probably yield some further information relative to quite early peaches, though the severity of the past winter has narrowed down somewhat the chances for learning in this direction. In plums, the Wildgoose is about the only kind that will be shipped to any extent this month; this, owing to its sure bearing, and the price obtained for the fruit, is still gaining in popular favor. Last season the fruit of this variety when put up neatly in quart baskets, and shipped to New York and Philadelphia markets in berry crates, sold readily for twenty cents per

quart—a very remunerative price indeed, as the trees usually are quite productive. The attention this class of plums has received during the last ten years has served to bring out many different varieties more or less valuable, owing to quality, size, season of ripening, &c.; the latest being the "Blackman," which is represented as a cross between the Wildgoose plum and peach. As to the fruit we have as yet no personal experience, but the young trees are very marked in their habits of growth, being very upright and rapid in their growth, the foliage resembling that of the peach very much. Other experiments with the Chickasaw, now being made by fruit-growers in different places, will doubtless result in great improvements on the present standing of that class of plums.

In the FRUIT GARDEN for the present month, the raspberry and blackberry beds will be the objects of greatest interest; with raspberries the rivalry seems to be confined to the red varieties. A few years back, when the Philadelphia and Clark were introduced, the question as to hardness was settled (?)—but then followed Herstine, Saunders, &c., which were so greatly superior in size and quality (!!!) that growers of raspberries were again unsettled, and so it has been "up and down" with varieties ever since, and so it will continue. The Cuthbert and Queen of the Market—or Queen of the Market (as some growers believe them identical) seem to lead in interest at present, but already there are a dozen or more newer kinds contending with them for popular favor. With good culture and attention doubtless any of them are good—and *vice versa*. With the blackberry, however, it seems to require more time to displace a variety that gets a footing in the favor of growers, as the Wilson, Dorchester and Kittatiny are still depended on as the "main stay." Other kinds have made feeble battle for notoriety, but were soon lost to favorable notice. What even a year may bring forth in this line, with the army of progressive and persevering American fruit-growers, is beyond conjecture. As every avenue leading toward the improvement of fruits and their culture seems thronged with eager explorers, and while many in their enthusiasm will shout "eureka" too soon, such premature explosions will only tend to make others more determined, by the aid of art and well directed skill, to wrench from nature her grandest and most valuable jewels, which she annually conceals in the seeds and plants of her production.

Complimentary.

The following note, coming from so eminent and practical an agriculturist as Judge Fullerton, is peculiarly gratifying, and we give it as bearing testimony to the appreciation of the *American Farmer* by such readers:

The last number of the *American Farmer* is a very excellent one, and I am admonished by it that my last year's subscription is unpaid. I therefore enclose subscription price for the last and the current year. I get the worth of my money many times told.

Yours truly, WM. FULLERTON.
New York, June 19, 1881.

Home Department.

Some Morning Roses.

FOR H. E. D.

These must have dropt down last night from the skies,

Though I can't see their little sky-wings,
But there's not one look of this world in your eyes,
You beautiful things!

Not a look of its weariness, troubles nor cares,
Not a hint of its earth-mold ye yield,
But perfume like incense of angels' sweet prayers
Wafted over God's field.

This luminous white has the pearly gate glow,
And this yellow the golden streets see;
This red is the sky-blush bloomed out on the bough
Of some Paradise tree,

Then dipt in the river that quivers with light,
Till the drops, every one crystal down
Into diamonds that flashed in their sun-kindled white
From some seraph's crown.

Perhaps some good angels last night in their sport,
Leaning over the "wall" there could see
Us out in the dark, and "Poor children," they thought,
"How sad they must be!"

"Some hearts there so desolate, weary and lone—
Let's throw this 'Good morning' of Hope,"
Then over the sky-wall these roses dropt down,
To make us look up.

I take them, sweet angels! your fresh morning prayer,
Breathed over this world's weary road,
To show us what beauty is waiting us there—
In those gardens of God.

Virginia.

TARPLEY STARR.

A Strict Division of Household Duties of Questionable Advantage.

It is by no means easy to abandon favorite theories, and when one finds one's self called upon not only to drop them but also to proclaim the fact, there must be some pretty good reason for such self-mortification. To "live and learn" is, however, our common privilege, and we will have learned to little purpose if we keep the results of such knowledge to ourselves.

I have ever yielded becoming deference to law and order in the household, and trust I may continue thus to do, but I have come to question much in the administration of such law that has been hitherto easily accepted, and to value best the order that comes without many rules. Throughout most of my housekeeping experience I have thought it essential to good government in my home to apportion the duties thereof, according to circumstances, among the different parties who might be expected to assume them, whether members of the family or servants. I don't know how I came to adopt this plan, but I know it is one that is generally approved and to some extent adopted.

There is a great deal in this plan to recommend it, and theoretically I dare say it will always be popular, but practically I now think

it open to very grave objections; and if I were beginning again with a family of young daughters I should risk a good deal in the way of method and order rather than seek to promote it by the division of labor and division of interests which is sure to follow. Servants must of course to some extent have their special line of duties, but they usually expect to depart from them if the occasion calls for it; few of us would keep a servant who refused to do so. But mature members of the family, if once committed to regular duties, do not cheerfully submit to a variation of them, and therefore I have learned to think that it is a mistake to educate them on that principle.

Our daughters, or any other female members of our family, when they reach maturity should feel that the obligation to promote the well-being of the household generally rests upon each of them quite as much as upon the house-mother, who may be supposed at this time to have spent the best of her life and energies in its service. If this goes no farther than the performance of a stated number of duties each day, after which they may rest as regardless of incidental demands as if they were in any other boarding-house, how easily might their places be supplied by hirelings; and this is what a strict division of the daily duties is very apt to lead to.

Who that has ever had the charge of a household does not know that the most onerous duties thereof cannot be classified? If it were possible to bring the human mind, with its constant variations, and the human family, with its individual wants, into one channel, one might hope to anticipate them and order the work of the house accordingly. But so long as humanity has its vagaries will there be duties for some one that no mortal can anticipate fully; therefore when there shall have been the most careful division of duties, upon whom will the incidents fall? Probably it is the mother, who has already her share, or servants who also have their hands full, who will be expected to assume them. Other unpleasant results may arise if any one of the daughters is called away by sickness or pleasure unless by special arrangement. Of course all these difficulties can be obviated without at all disarranging domestic matters where the interest for home welfare is predominant, but what I conceive to be the objectionable feature of this method is the narrowing of each interest; in other words, it promotes the growth of selfishness, to which we are all so prone.

There can be no possible objection to such arrangement in a family where all have come to years of correct understanding, and with hearts and minds bent upon one object, and that the general good; but it seems hardly possible to impress such consideration upon the very young, or upon natures inclined to seek chiefly their own comfort and to question first and do afterward—if they must.

It seems to me that the most healthful home qualities are developed where there is the greater dependence of one upon the other and universal care for each other among brothers and sisters; where each is required first to look after what is exclusively his or her own—their own room, for instance, or their own clothing—and then to give to the family interest what is left of time or

opportunity for doing. The disposition to look out for self is sure to grow finally into the most offensive form of selfishness, such as shuts out even home affections.

The most pleasing picture of home life I can now recall is where each daughter thought it as important to be in her place at breakfast, or as long before as might be necessary, ready to take part in any demand for her services, as did the mother herself, and when this was over, to fall naturally into any duty, habit, or direction from the head called for; ready to help at anything that enabled them to be most helpful toward the accomplishment of the one ambition of all, the putting of the house in thorough order. And if father, brother or child came with an incidental demand, they were as likely to turn to one as the other and meet with a ready response, no one minding whose room they swept or whose bed they made while the common purpose of setting the house in order was being accomplished; and when this was done the family sewing or mending was not left to the mother alone, but was made common stock and easily disposed of, leaving whatever leisure there might be to be shared among them. The daughters naturally more inclined to seek pleasure outside of home could then do so without compunction, knowing that their mother was not left to struggle with accumulated work, and on returning find that she had also had her season of enjoyment as well as themselves, though it might have been only in the peaceful reflection of their own happiness, such as every true mother feels who sees her children filling creditably every niche in life where they belong, whether at home or in society. In such a home one is not likely to hear the murmuring question, when anything is to be done, "Must I do it?" It is almost sure to be, "Shall I do it?"

Natural capability for certain kinds of employment, and physical ability or the lack of it, in the home as elsewhere, often determines what is best for each to do, but that ought not in the home circle to limit any one's efforts or painstaking for the general good. In any house where habitually one member will pass by things waiting to be done, although requiring little or no effort to do them, while another whose special duty it is considered to be is not near or is otherwise occupied, and where the different ones are more inclined to question whose the duty may be, if there is a doubt about it, instead of rising cheerfully to the occasion themselves, there you may be sure the blight of selfishness has fallen, which occasional impulses, however generous or kind, can never overcome.

Young girls whose habits are in the formation stage, and whose knowledge in household matters generally is yet to be gained, will have better opportunities where they are allowed to take part in every department, and when this is practiced there is little danger of their failing in homes of their own, even if very little has been required from them, whereas the strictest ruling within prescribed lines may leave them utterly unqualified for the general supervision of a house.

Is it worth while to print the moral of these somewhat random remarks? If so I will add,

for the benefit of mothers and daughters, that however desirable it may be to have your home nice and orderly, it is of the utmost importance that it should be accomplished without the sacrifice of a spirit of loving kindness between those who are to make a home of it. However well kept or well appointed a house may be, if the home spirit is wanting it might better be a legitimate "boarding-house," where the inmates may be utterly independent of each other without injustice to any one—there is no bond there to hold any one beyond their individual pleasure; but in the home our heavenly Father has in His goodness provided such influences as will usually keep the family interest united, to some extent, until the inevitable break comes, and unless the affections of the different members thereof are held by an unselfish regard that speaks from day to day and hour to hour in the most insignificant of their actions, those who survive this break in the home will no longer be kindred except in name. CERES.

A Few Plain Truths for a Few Plain People.

In your June number appeared a short article from a Virginia lady asking whether a farmer's wife should have the privilege of using a horse. We suppose she referred to very busy times, as we are willing to believe that few men refuse to grant a reasonable request of this kind at a reasonable time. The answer given by our worthy "Ceres" was excellent, and yet it seems to us that a little more may be said upon this and a kindred subject. To begin at the beginning, no married couple can live happily together without practicing what we once heard a sabbie preacher call "matchful forbearance." Our dear old bachelor poet Whittier says:

"The kindest and the best matched pairs
Will have occasion to *forbear*,
And find each day of life they live
Something to pity, and perhaps forgive."

If each partner in the firm studies to promote the comfort and retain the love of the other, there can be no clash of interests. But, dear sisters, if there is a time to dance and a time to refrain from dancing, there is also a time to go and a time to refrain from going. During planting, harvesting and seeding, if there is a mortgage on the farm, or large bills unpaid, the farmer's wife who requires a work-horse for any other than necessary errands or recreation is unjust to her husband's creditors.

There will be plenty of days when the ground will not be suitable to work which she can take advantage of to see her friends or go to the store, and a drizzly day for the latter will insure her being well waited on by a pleased merchant. She should use a note-book and pencil; and instead of sending five times a week, buy enough at once to last until there is certain to be another opportunity. So much has been said in favor of purchasing groceries in this manner that we wonder it is not more generally adopted. The provident farmer will have enough wood cut up and stored by June 1st to last through harvest, and he will see that the flour, meal and salt

barrels are in a condition to stand the heavy drains of this most important season. If the wife has to perform so much additional work during the summer as to leave her little time for rest or sewing, let him, by all means, furnish her with some help in the wearisome routine of "band and gusset and seam." If a ditch has to be dug, or a fence has to have new posts, the wherewithal is generally squeezed out of something, somehow; and this world will have taken a long stride towards the millennium when what is "sauce for the goose is sauce for the gander" in this respect. About ten years ago a most amusing story came out in one of the magazines. The scene opened by the declaration of a husband that it was all romantic folly about its making any difference that the family purse was carried in his pocket, since it was so easy to abstract the substance therefrom. Upon the wife's demurring to this, he rashly offered to let her have charge of the funds for one week, promising to come to her for every penny he required. He was disgusted and amazed to find how often he seemed to need fifty-cent pieces and dollar notes, and how excessively annoying it was to take money in such broken doses after he had expressly stated its probable destination. When, after several days, he mustered courage to ask for five dollars at once, he was overwhelmed with the cool reply: "I am scarce of change to-day; here is a dollar and forty-three cents; make that do this time." Before the week had dragged through he candidly acknowledged that he could not stand such a state of affairs for six months without losing his senses, and decided to give her a certain sum on the first day of every month to run the house and clothe the inmates. A friend of ours was condoling with a very old gentleman who had lost a most lovely wife, and he said: "You have, at least, the great consolation of knowing that you were always a good husband to her." "No," said the bereaved man, with many tears, "I was not. I have remembered that during the whole of our long wedded life together, I never gave her money unless she asked me for it, and I grieve to think that she may not have been able to spend in charity what she desired, when I could well have afforded her more."

We have been in six States; we know we have seen good farming, and we have seen very bad, if not the worst. The result of our observation is, that it is generally easier to build a barn than a pantry, or a corn-crib than to make a dark closet in the garret to store winter clothing. A horse-rake appears to cost less than a wash-tub, a plow than something to dip water, a grindstone than a tea-kettle, a cross-cut saw than a pair of button-hole scissors. We have known one lady who lived on a three-hundred acre farm for thirty years, and although she made delicious cake, waffles and muffins, she beat her eggs with a kitchen fork the whole of that time.

A physician should not call attention to a disease without endeavoring to suggest a remedy. So we would ask each farmer and his wife to discriminate nicely between their wants and their needs, and keep a strip of paper tacked on the inside of a closet door to contain their *joint list*; then when the next five-pronged fork and

broad-ax are purchased she will stand an equal chance of replacing the stove-rook and tack-hammer which Johnny dropped down the well two years ago. It is bad management to let every thing wear out and break down at once. The purchase of a pair of sheets and pillow cases, a bolster case, a table cloth and a few towels each autumn is far better and more economical than to have your whole stock out of order and then have all new.

If a part of your cooking stove burns out replace it as soon as possible, and you will be surprised to find how many years the same old friend will bake and boil as well as at first. There may be farming communities where things are ordered more equally than in those we have visited, and we do not by any means lay all the blame at the door of the farmer. He has been taught since his first boots were tried on (and found too tight) that women as a class are inferior to men physically and mentally; and too often the wife has not sufficient self assertion to do herself justice, her whole training from the cradle having a tendency to teach her that she cannot depend on her own judgment in spending money. We may not live to see a great change in this respect, but it will come to pass if we who have sons impress upon them the justice of giving their probable wives a share of the income for private use, and you who have daughters furnish them with a quarterly allowance and see that they keep a strict account of the manner in which it is expended. It is not work but worry that wears out most people.

The cultivation of the land is one business in which the services of the wife are as important and as profitable as are those of the husband.

Such being the case, if it is her pleasant duty to see that his home be cheery and comfortable, his meals palatable and his clothing neat, it can be no less his pleasant duty to provide for his family promptly, ungrudgingly, and as liberally as his circumstances will permit.

June 17, 1881.

MRS. N. E. D.

A Boon to Woman—Her Labors Lightened.

The Cooley Creamer.

It is not to recommend the above-named patent particularly that this article is written—for there may be others equally good—but to draw attention to the merits of the principle and the great saving of labor to the ladies of our families resulting from its use. The farmer has escaped very much of the drudgery of his occupation by the invention of labor-saving machinery, and he is not slow to invest considerable amounts in new contrivances for accomplishing his ends. Too often, however, the "women folks" are compelled to make out as best they may with the implements that were "good enough" for their mothers. When anything is suggested that might render the many cares and duties of the household less irksome, it sometimes happens that the "head of the house," who has his hay-fork, and reaper, and drill, and mower in nice order, thinks "money is too hard to get out of a farm to spend for new-fangled notions."

It is a lamentable fact that the wives and daughters in many families are not saved as much as they might be by a little observation of their wants and some judicious expenditure. Any one who has witnessed the laborious, damp and disagreeable duties connected with dairy operations, particularly if, as is sometimes the case, the spring-house is at a distance from the dwelling, will at once recognize the value of the "creamer." Exposure to sun and rain, and what is always distasteful to ladies, dragged skirts, may be things of the past.

Upon this place, about three hundred yards from the residence, we have a picturesque stone spring-house embowered in trees, with elevated trough and all requisites save one—water. The draining of the adjacent fields by numerous blind ditches has cut off the supply of water and converted our "never-failing spring" into a dry bed. We had intended removing the stones and rebuilding a milk-house near the kitchen door, to be supplied from the pump, each person using it "paying toll," as it were, by forcing a portion of the water drawn into the troughs. The cost would have been about \$150. Our friend Chas. Stabler had been using a "creamer," and was so enthusiastic as to its capabilities that after examination I purchased one at an expense of \$38. They can be obtained of various sizes, ours being 3 feet by 2 feet and 3 feet high, containing 44 cans, and answering for a dairy of 12 cows, making from 60 to 80 lbs. of butter per week, according to the quality of the cows. The advantages of the "creamer" are that it can be placed on a porch, in a passage-way or large kitchen (provided a well or pump is convenient), always under cover, and saving many steps and much exposure to the weather in the course of a year. It saves the labor of skimming, as the milk is drawn off and the cream remains in the can. The milk and cream are always free from motes and specks, and as one can hold as much as several pans, and the cans have only to be washed once in twenty-four hours, there is a great saving of labor in "washing and cleaning up."

I have drawn the attention of your readers to the "creamer," as it may be as new to some of them as it was to me, and may save them such an expense as I was about to incur. A neighbor who makes butter for the Washington market was expecting to build a milk-house, but for \$65 (10 per cent. off for cash) purchased a "creamer" which will hold the milk from thirty cows, and is superior in every respect to any arrangement he could have made. Another dairyman has a spring-house that cost him \$300, but he would much prefer a "creamer" of the size last mentioned. They have been used without ice, but are managed with far less trouble when ice is employed.

Any one about to build a dairy, or whose present house or cave may not be satisfactory, would do well to investigate the subject.

HENRY C. HALLOWELL.

"Rockland," Montgomery Co., Md.

[This and several other styles of creamers we know are very effective in their operation, and our correspondent will receive the thanks of our lady readers especially for calling attention to them.—*Eds. A. F.*]

Questions and Answers.

Will "Ceres" please tell me how to clean my white Shetland wool shawl, and oblige E. C.

Olney, June 15, 1881.

Answer.—Flour of the best kind is the best thing I know of for this purpose. Have a vessel large enough to prevent scattering; place your shawl in it and throw about a teacup of flour over it; rub thoroughly, as if washing, between your hands for several minutes; then shake it out. If this has not removed every bit of the soiled appearance, repeat until it has, and then your shawl will look like new.

DEAR CERES: Pray tell me, if you can, what a "caudle party" is. I have heard of "caudle lectures," which are supposed to be exclusive matrimonial privileges, but cannot imagine that these would have much interest for a gathering of friends. H. E. M'C.

Howard County, June 23, 1881.

Answer.—A "caudle party," or reception, is given by a mother and her babe when the latter is a month old. There is a bowl of "caudle" provided, from which each guest is expected to take a sip, thus drinking the health of the infant in a beverage in which it may participate. In some countries a coin or jewel is dropped into the bowl as an offering to the baby. How "curtain lectures" came to be called "caudle lectures" I don't know.

DEAR CERES: The shoemaker threw into my shoes more squeak than is agreeable to me or my friends. How can I dispose of it?

South River, A. A. Co., Md.

L. M. B.

Answer.—My own soul has often been vexed by the misplaced generosity of the shoemaker, and I have only been able to modify the difficulty by saturating the soles of my shoes with linseed oil. I dare say any other oil would do as well. Why should not oil pacify troubled soles as well as troubled waters?

Mrs. Johnson's Mountain Cake.

One cup of butter, cream it well; one pound of powdered sugar, whites of ten eggs, teaspoonful of cream of tartar dissolved in a teacup of milk, half a teaspoonful of soda rubbed in three cups and a half of flour; bake in four jelly-cake pans. *Iceing.*—The whites of three eggs, one pound of powdered sugar, and flavor with vanilla. When the cakes are cold ice them and flavor with lemon.

DRYING CHERRIES.—Cherries intended to be dried must be first stoned, spread on flat dishes, and dry them in the sun or warm oven; pour whatever juice may run from them over them, a little at a time; stir them about that they may dry evenly. When perfectly dry line boxes or jars with white paper and pack close in layers; strew a little brown sugar, and fold the top of the paper over them and keep in a dry, sweet place.

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*. Subscribers who have minerals, ores, marls, fertilizing materials, or other substances, will be advised through our pages, by competent chemists, as to their composition, uses and value, by forwarding specimens to this office, *expressage or postage prepaid*. Questions as to application of chemical science to the practical arts will also be answered.

*. Persons desiring information or advice on diseases or injuries of domestic animals, will receive replies from a competent Veterinary surgeon, by giving a plain statement of the symptoms, &c.

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BALTIMORE, JULY 1, 1881.

The Baltimore County Fair.

The exhibition of this year will be held at the Timonium Fair Grounds, on September 6th, 7th, 8th and 9th. The premium list has been published for several weeks, and may be had upon application to the officers or at the *American Farmer* office. It is comprehensive in its provisions, and will evoke a lively competition, it is expected, in every department. This Society is very popular locally, and being very accessible from Baltimore attracts a large attendance. Many special features are provided. This year a special prize of one hundred dollars is offered for the best herd of Jerseys exhibited, these cattle being the most prominent breed around Baltimore. The annual address will be delivered on September 8th by Hon. Samuel J. Ran-

dall, of Pennsylvania, late Speaker of the United States House of Representatives, a gentleman of vigorous thought, whose views on topics of general concern allied to agriculture will be heard with interest.

Though this is a county Society, exhibitors are invited from any quarter. The previous fairs have proved very satisfactory to the manufacturers and dealers in implements and machinery, who have made many sales to the numerous farmers present.

The International Cotton Exposition.

We have received from Mr. R. W. L. Rasin, vice-president, and the representative of the enterprise in Baltimore, a lithograph of the building to be erected for the great display at Atlanta, Ga., which will open October 5th and continue to December 31st. The accommodations provided are of the most extensive and convenient character, and show the faith which is felt by the promoters of the scheme that it will be a success of grand proportions.

This exposition it is intended to make, in effect, a World's Fair, and though its name comes from the great Southern product, it is by no means proposed to limit the displays either to cotton or to allied interests and products. It is rather intended to make it a general exhibition of manufactures, products, machinery, etc., and it is believed that, as the first undertaking of the kind in the South, it will command attention from the entire civilized world.

Public Sales of Sheep.

General Gilbert S. Meem, of Mt. Jackson, Va., writes us that it is his purpose to hold a sale of sheep about the 17th of August at Hagerstown, Md., and another, about a week later, at the new Baltimore stock yards—the exact dates to be announced in his advertisement in the *American Farmer* for August.

It is the purpose of General Meem to include a large number of superior sheep in these sales, and the opportunity afforded our Maryland flock-masters for obtaining good selections will doubtless be largely availed of, and the distribution of so many fine animals cannot but be advantageous to the stock interests of the State.

FINE STRAWBERRIES.—Messrs. Wm. Corse & Sons kindly sent us last month some specimens of their crop of Sharpless Seedlings, the largest berries we have ever seen, and of fine flavor.

THE CONTINUOUS TILE MACHINE, advertised by Mr. Wm. Wirt Clarke, promises to save a great amount of money in the production not only of tiles for draining, but of pipes for conveying water from springs, etc. By this machine drain tiles are made and laid in one continuous piece in the ditch, and it is so simple that any farm laborer can work it satisfactorily after a few hours' practice, only two hands being required to mix the mortar, produce and lay the pipes. It is claimed that at the present price of cement 1,200 feet of 2½-inch tile can be put down in ten hours at a cost not exceeding fourteen cents per rod. Mr. Clarke will give any information desired of the machine, farm and county rights for which he offers for sale.

WE CALL ATTENTION to the notice which is given in the advertisement of Col. Underhill, that the demand is likely this season to be greater than the supply of the old favorite and well proved Bickford & Huffman grain drill. Those purposing buying will govern themselves accordingly.

Received.

From the Secretary, Jos. H. Reall, New York, we have the first number of *The Journal of the American Agricultural Association*, a compact and neatly printed volume of 260 pages, which in contents and get-up reflects great credit upon the energy and discrimination of the Secretary, who is its editor. There are articles not only from numerous gentlemen, distinguished authorities in our country, but England has been laid under tribute, and valuable papers are presented from Mr. Lawes and Prof. Sheldon. We shall make some extracts hereafter from the work, which may be had from the Secretary, free of postage, for 75 cents.

From the Breeders' Live-Stock Association, Beecher, Ills., we have *The American Hereford Record*, Vol. I. The volume contains 2,915 entries (bulls and cows being entered indiscriminately), an index of owners and another of the animals, and a sketch of the history of Hereford cattle.

Shorthorns and Jerseys in England.

A correspondent of the London *Live-Stock Journal*, in alluding to the healthy condition of the Shorthorn market of that country, as evidenced in the sales of this year, refers to the interest which is being manifested for the "little

Jersey." Perhaps we on this side of the big pond have taught John Bull a lesson as to the value of this breed of cattle which he had not before learned. The correspondent also shows that more attention is now being given to the more solid values of their favorite breed than mere fashion. The Mr. Thornton mentioned is the great cattle auctioneer of England:

"I have been for some time quietly watching the course of events in the Shorthorn world, and I am glad to think that symptoms are now manifesting themselves all round indicative of a return to ideas and principles of sense and soberness on the part of breeders and buyers.

"Like most other things in this world, there was good and evil in the high prices prevailing for the fashionable cattle for a number of years. There was good in the general stimulus they gave to all matters relating to well-bred animals, there was good in the example set to all country gentlemen to take an interest in stock, and there was great good in the practical proof it gave to sleepy farmers and easy breeders who never exerted themselves to improve their common county beasts, of the immense importance of getting really good sires. But there was evil, and not a little in the tendency, in the temptation to defy nature and common sense as well as the dictates of hoary experience, for the sake of startling averages at the sale ring.

"In your article of last week on the 'Milking Properties of Cows,' you allude incidentally to one practice which I frequently discussed with neighboring enthusiasts, and condemned; I mean the practice of drying up a cow as quickly as possible after calving, with the view of getting her in calf again without losing time. I did not believe in this mode of hurrying nature, and I agree with you in your remarks upon the importance of keeping up the milking properties even of fashionable Shorthorns.

"Earnest practical breeders will not be discouraged by the more moderate tone now prevailing in the Shorthorn market. Extremes are never desirable; and prudent men prefer steady prosperity to the random gains even of pluck and luck. Nor will the progress of scientific breeding be hindered, but rather furthered, by the lowered scale of figures. The fact is, money has been at the root of all the evils that have crept into recent modes of Shorthorn breeding. The temptation to yield to superstition, in place of loyally striving after fact, was too great; but with lessened temptations sensible men will recover their reason and judgment, and the result will inevitably be an increased number of superior cattle of various tribes, and a decreased number of extraordinarily high-priced cattle of any tribe or tribes.

"Not the least interesting sign of the times is the hearty enthusiasm with which Mr. Thornton has taken up the pretty little Jersey. Fashionable Shorthorn men were somewhat inclined to the too-common John Bull way of thinking, and to regard with something akin to contempt most other breeds. With this fault Mr. Thornton could never be charged; as never was narrow-minded nor one-sided, for whenever he saw a well-bred animal, of whatever breed, he admired it heartily, without a shadow of disloyalty to the 'pure-bred Shorthorn.'"

Baltimore Markets—June 30.

Breadstuffs.—*Flour.* As usual on the approach of the holidays the market is quiet. We quote as follows: Howard Street Super \$3.50 @ 4.25; do do Extra \$4.50 @ 5.25; do do Family 5.50 @ 6.50; Western Super 5.50 @ 4.25; do Extra 4.50 @ 5.25; do Family 5.75 @ 6.50; City Mills Super 3.50 @ 4.50; do do Extra 4.75 @ 5.25; do do Rio brands Extra 6.50 @ 6.62; Winter Wheat Patent Family 6.50 @ 7.50; Spring Wheat Family "clear" 5.25 @ 5.55; Spring Wheat Family "straight" 5.75 @ 6.25; Minnesota Patent Family 6.50 @ 7.05; do do do high grades 7.25 @ 7.50; Patapsco Family 7.25; do Extra 7.05; Chesapeake Extra 6.85; Orange Grove Extra 6.65; Fine 3.60 @ 3.25; Rye Flour 5.50 @ 5.75.

Wheat.—The market was fairly active. We quote: Cash 1.24 1/2 @ 1.34 1/2, June 1.24 1/2 @ 1.34 1/2, July 1.33 1/2, August 1.21 1/2 @ 1.22, September 1.22 @ 1.22 1/2, October 1.23 @ 1.27, Long Berry 1.28 @ 1.32.

Corn.—The market was active with prices steady. We quote Cash 54 1/2, June 54 1/2, July 54 1/2, August 55 1/2 @ 55 1/2, September 56 1/2 @ 56 1/2, S. White 50, S. Yellow 58.

Oats.—The market is firm and inactive, holders not being willing to sell at the prices offered. Western mixed 36 @ 37, do bright 38 @ 39, do white 39, Pennsylvania —.

Rye.—There are no arrivals reported, and the market is dull and nominal at 90 @ 92 cts.

Hay and Straw.—The inquiry for hay is slow, and the market is dull, with only choice lots well maintained. We quote as follows viz: Cecil County Timothy \$14 @ 22, Pennsylvania do \$13 @ 16, Western \$13 @ 17, Mixed \$13 @ 14, and Clover \$9 @ 11 per ton. Straw is steady and quiet at \$9 @ 10 for Wheat, \$12 for Oat, and \$21 @ 23 for Rye per ton.

Mill Feed.—Spring Bran is quoted at \$10.50 @ 11 00, and Middlings at \$14. City stock is nominal at \$17.

Cotton.—The situation is very steady and offering of stock moderate. We quote as follows, viz: Middling 11; Low Middling 10 1/2 @ 10 3/4; Good Ordinary 9 @ 9 1/4.

Live Stock.—*Beef Cattle.*—The market was slow. We quote very best on sale 5 1/2 @ 6 1/2 cts; that generally rated first quality, 4 1/2 @ 5 1/2 cts; medium or good fair quality 4 @ 4 1/2 cts; ordinary thin Steers, Oxen and Cows 2 1/2 @ 3 1/2 cts; extreme range of prices 2 1/2 @ 6 1/2 cts; most of the sales were from 5 1/2 @ 6. *Milk Cows.*—But few, and those common cows, offered. Prices easy, \$18 @ 25 wholesale. *Hogs.*—Trade, throughout all the yards, reported fair to good. We quote common Hogs at 7 1/2 @ 8 cts, and 8 1/2 @ 8 3/4 cts, for better grades. *Sheep and Lambs.*—Trade for good quality was fairly active. We quote Sheep at 3 @ 3 1/2 cts, Lambs 4 @ 7 1/2 cts.

LADIES who appreciate elegance and purity are using Parker's Hair Balsam. It is the best article sold for restoring gray hair to its original color and beauty. *

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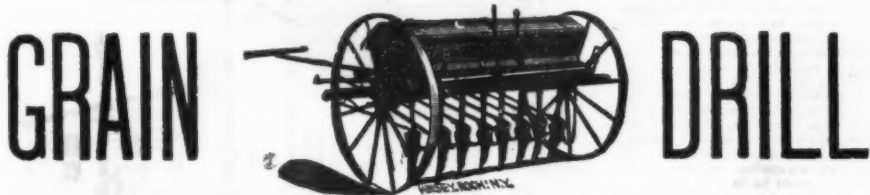
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HUNDREDS of men, women and children rescued from beds of pain, sickness and almost death, and made strong and hearty by Parker's Ginger Tonic are the best evidences in the world of its sterling worth. You can find these in every community. *Post.* See advertisement. *

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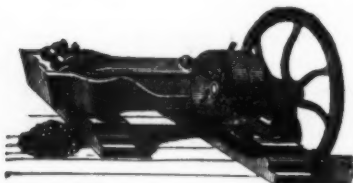
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RAW GROUND LIMESTONE is one of the principal ingredients in the Original Soil, and is the CHEAPEST AND BEST FERTILIZER.

AFTER SIX YEARS USE IT HAS BEEN FOUND TO BE THREE TIMES AS VALUABLE AS BURNT LIME, AND WITH



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It does not COST HALF AS MUCH to make. This machine takes a LUMP OF RAW LIMESTONE, 3 to 8 INCHES SQUARE, and CRUSHES AND PULVERIZES IT READY TO SOW OR DRILL at one motion, without the use of BURR MILLSTONES OR ROLLERS. GROUND RAW LIMESTONE, by six years use, has been found to be worth \$4.28 per acre over phosphate; \$9.70 per acre over Guano, and \$5.90 over Salt, and only needs renewing every four years. The above machine is very simple and durable, does not cost much, and can be operated same as a Threshing Machine, with horse power. The same Machine by simply changing dies becomes the best crusher for Road Stone.

Address only Makers, **TOTTEN & CO.,**
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SAVE THE EXPENSE OF BUILDING A BRICK CHIMNEY.

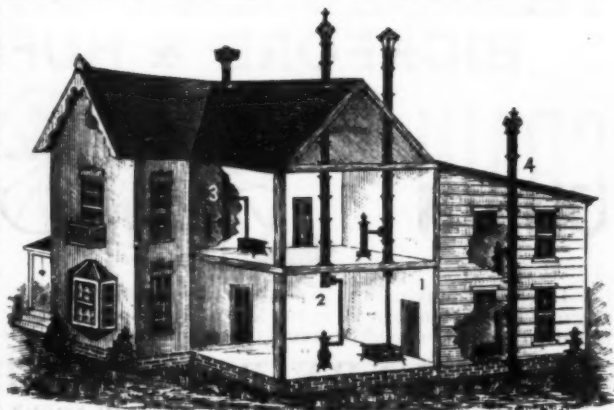
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Send for descriptive circular with full information.

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The "Economical" Fertilizer is made from Slaughter House Bones, and contains no dirt or sand. It is rich in Potash and other plant food, and is used extensively in different States with excellent results.

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Apply to Stations at Canton and Spring Gardens,
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Pedigreed Rams of all ages, among which are 3 Imported Rams of 2 to 22 lbs. fleece, and some choice Ram-Lambs; also 25 to 30 Yearling Ewes of 12 to 18 lbs. fleeces, sired by Golden Locks and Duke of Gloucester, to be bred next fall to my Imported Ram Royal Sherborne, with capacity for 25 lbs. fleece and 375 lbs. carcass.

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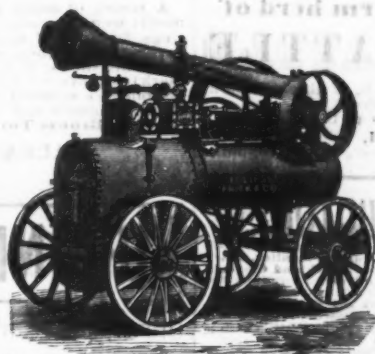
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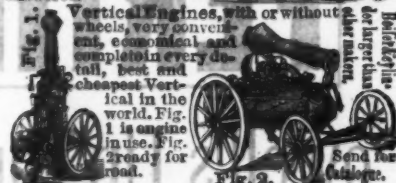
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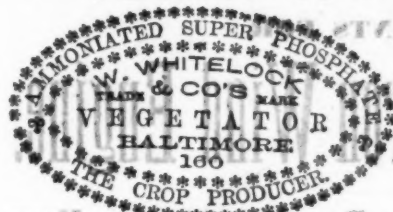
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